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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
and The Agricultural Experiment Stations
of the United States

Quality Characteristics of Cultivars and
New Germplasm of Wheat Bred and Grown in the
Western States^{1/}

Fortieth Annual Report
of the
Western Wheat Quality Laboratory
1987 Crop ^{2/}

WRU No. 5802-20050-010

G.L. Rubenthaler, H.C. Jeffers, A.D. Bettge, D.A. Engle,
B.S. Raney, P.A. Sperry and T.M. Durfee

Dec. 1988

- ^{1/} In cooperation with the Arizona, California, Idaho, Montana, Oregon, Utah, and Washington Agricultural Experiment Stations who developed and grew the experimental wheat selections studied.
- ^{2/} This is a Progress Report of cooperative investigations of the milling and baking characteristics of current commercial cultivars and new germplasm of wheat grown in the Western states. Interpretation of the data may be changed with further experimentation; therefore, data in this report are not for publication, display, or distribution without prior written approval of the Agricultural Research Service, USDA and the cooperating agencies concerned.

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	<u>Page</u>
TABLE OF CONTENTS.....	ii
SUMMARY OF ACCOMPLISHMENTS.....	iii
INDEX OF NURSERIES.....	v
ABBREVIATION DESCRIPTION.....	viii
INTERPRETATION OF DATA.....	ix
INTRODUCTION.....	1
METHODS.....	2
PUBLICATIONS AND REPORTS (CY 87).....	12
INVITED TECHNICAL PRESENTATIONS.....	13
VISITORS.....	16

Western Wheat Quality Laboratory
1987 Crop

SUMMARY OF ACCOMPLISHMENTS

The milling and baking quality of 3443 experimental wheat germplasm lines (F5 and later) grown in the western states in the crop year 1987 were evaluated. These included 793 from WA, 681 (OR), 19 (ID), 982 (CA), 106 from western regional nurseries, 149 commercial breeders, and 713 for other researchers, export cargos, and harvest survey projects. Evaluation criteria used to determine acceptable quality were standard tests for flour yield, protein, ash, color; cookie diameter, loaf volume and bread crumb grain; dough mixing requirements and water absorption; Japanese sponge cake volume and score; and Udon noodle yield and texture. About 25% of these samples were judged as having promising overall quality to fit their proper market class. Studies included materials developed for snowmold, dwarf bunt, foot rot and other disease resistance as well as various crop management practices and salinity stress tolerance. These represent new germplasm with potential improvement for both agronomic production hazards and desirable quality for domestic and export markets. Results were provided to each cooperator, as completed. Copies of the data are provided here in Nursery Codes #1 through #135. See the Index of Nurseries (Page v-vii) for nursery titles, locations and breeders.

In co-operation with a grant from the PNW Grains Council the milling and baking evaluation were made on commercial composites representing the wheat crop (1987) of WA, OR, and ID. The data was used in their marketing brochures. See Nursery Code number 013.

In cooperation with U.S. Wheat Associates, Inc., we again participated in a Western White Export Cargo analysis project. A set of samples (55) was collected from out-going cargos and is reported as Nursery Code #20. Other groups of 55 samples were collected and are reported as Nursery Codes #121 and 133. The object of the cargo sample project was to follow the end-use qualities of export shipments through the marketing year. Results show a high degree of uniformity.

In cooperation with the PNW Grains Council, 14 advanced experimental wheat selections were pilot milled and sent to a group of collaborators for evaluations. These include 4 mills in Japan, 2 in Korea, 1 in The Philippines, 1 in Morocco, 1 in Egypt, and 11 local milling and baking firms. Results of our analysis are in Nursery Code #71. Final publication of all collaborator results were assembled and published as the 17th Annual Report-1987 Crop-PNW Grains Council Collaborator Test, July, 1988.

In cooperation with Nisshin Flour Milling Company, and U.S. Wheat Associates in Tokyo, we evaluated 28 soft white wheats which represented the current varieties. These samples were collected with the variety identity preserved at sites in OR, ID, and WA. The objective was to determine the variability in functional baking quality of Japanese products within a variety and among locations. This was the second year of a 3 year study. Data is presented in Nursery Code #012.

The milling and baking properties of an additional 1316 F4 early generation samples from the 1987 crop breeding programs were also evaluated. These experimental wheats were crossed to develop resistance to snow mold, foot rot, dwarf smut, rusts, and adaptability to various crop management practices, and represent all classes, grown in the region. Tests used to characterize end-use quality were flour yield, break flour yield (soft wheats), kernel hardness, flour protein, mixograph, water absorption and dough properties, and alkaline water retention capacity. About 42% (552) were scored as promising to meet the overall quality of their market classes. About 1,000 micro (10g) F3 samples were also evaluated for milling quality. Crosses made to germplasm sources for sprout resistance were analyzed for alpha-amylase activity. No data is included here, it was sent only to the breeder who submitted the samples.

NURS CODE	NURS ID	NURSERY NAME	LOCATION	BREED	NOSAM	BLABNO	SDATE	BRCO	COCO	CACO	NOCO	PBAR
001		SUBSTITUTION LINE CROSSES (EXP.789)	DAVIS, CA	QUALSET/LEVI	120	870001	87229	1	0	0	0	12
002		CHINESE SPRING SUBSTIT. LINES (EXP.728)	DAVIS, CA	QUALSET/LEVI	36	870121	87229	1	0	0	0	11
003		HAMILTON MEADOW FARMS	CHEHALIS, WA	H. HAMILTON	2	870157	87229	1	0	0	0	10
004		SOFT WHITE WINTER WHEAT	RITZVILLE, WA	C. J. PETERSON	88	870159	87230	0	1	0	0	8
005		VARIETY TRIAL (BOSWELL SALINITY 7110)	CORCORAN, CA	C.O. QUALSET	30	870247	87230	1	0	0	0	11
006		VARIETY X N X DATE (EXP.7105)	DAVIS, CA	QUALSET/JONES	63	870277	87230	1	0	0	0	11
007		VARIETY X N X DATE (EXP.7106)	DAVIS, CA	QUALSET/JONES	42	870340	87230	1	0	0	0	12
008		VARIETY X N X DATE (EXP.7108)	DAVIS, CA	QUALSET/JONES	63	870382	84230	1	0	0	0	10
009		VARIETY X N X DATE (EXP.7109)	DAVIS, CA	QUALSET/JONES	42	870445	84230	1	0	0	0	11
010		POST ANTHESIS N EXP.	DAVIS, CA	KASARDA/CASSMAN	47	870487	87236	1	0	0	0	8
011		COMMON WHEAT TEST	DELTA CO., CA	L.F. JACKSON	30	870534	87237	1	0	0	0	11
012		NISSHIN MILLS PNW VARIETY/LOCATION STUDY	ID,OR,WA	.	28	870564	87238	0	1	1	0	11
013		PNWGC CROP QUALITY SURVEY	ID,OR,WA	.	20	870592	87254	1	1	1	1	9
014		PRELIMINARY BREAD WHEAT YT (EXP.764)	DAVIS, CA	C.O. QUALSET	18	870612	87258	1	0	0	0	11
015		PRELIMINARY BREAD WHEAT YT (EXP.765)	DAVIS, CA	C.O. QUALSET	14	870630	87258	1	0	0	0	11
016		PRELIMINARY BREAD WHEAT YT (EXP.766)	DAVIS, CA	C.O. QUALSET	12	870644	87258	1	0	0	0	11
017		PRELIMINARY BREAD WHEAT YT (EXP.767)	DAVIS, CA	C.O. QUALSET	19	870656	87258	1	0	0	0	11
018		PRELIMINARY BREAD WHEAT YT (EXP.768)	DAVIS, CA	C.O. QUALSET	16	870675	87258	1	0	0	0	11
019		PRELIMINARY BREAD WHEAT YT (EXP.769)	DAVIS, CA	C.O. QUALSET	10	870691	87258	1	0	0	0	11
020		U.S. WHEAT ASSOCIATES CARGO SAMPLING VI	.	.	55	870701	87264	0	1	1	1	8
021		PRELIMINARY BREAD WHEAT YT (EXP.770)	DAVIS, CA	C.O. QUALSET	10	870756	87265	1	0	0	0	11
022		PRELIMINARY BREAD WHEAT YT (EXP.771)	DAVIS, CA	C.O. QUALSET	26	870766	87265	1	0	0	0	11
023		PRELIMINARY BREAD WHEAT YT (EXP.756)	DAVIS, CA	C.O. QUALSET	6	870792	87265	1	0	0	0	10
024		PRELIMINARY BREAD WHEAT YT (EXP.757)	DAVIS, CA	C.O. QUALSET	9	870798	87265	1	0	0	0	10
025		ADVANCED SEPTORIA SEL.TRIAL (EXP.706)	DAVIS, CA	C.O. QUALSET	19	870807	87265	1	0	0	0	11
026		PRELIMINARY BREAD WHEAT YT (EXP.731)	DAVIS, CA	C.O. QUALSET	33	870826	87265	1	0	0	0	10
027		IRRADIATED INIA TRIAL (EXP.709)	DAVIS, CA	C.O. QUALSET	20	870859	87272	1	0	0	0	10
028		ADVANCED SEPTORIA SEL.TRIAL (EXP.707)	DAVIS, CA	C.O. QUALSET	3	870879	87272	1	0	0	0	11
029		ADVANCED BREAD WHEAT YT (EXP.713)	DAVIS, CA	C.O. QUALSET	11	870882	87272	1	0	0	0	10
030		PRELIM BREAD WHEAT YT (EXP.732)	DAVIS, CA	C.O. QUALSET	18	870893	87272	1	0	0	0	10
031		WINTER/SPRING PLANTING STUDY	PULLMAN, WA	ALLAN/POMERANZ	28	870911	87273	1	1	1	1	00
032		COMMON HRS LARGE PLOT TRIAL (EXP.710)	DAVIS, CA	C.O. QUALSET	34	870939	87279	1	0	0	0	10
033		COMMON HRS LARGE PLOT TRIAL (EXP.711)	DAVIS, CA	C.O. QUALSET	14	870973	87279	1	0	0	0	10
034		COMMON SWS LARGE PLOT TRIAL (EXP.711)	DAVIS, CA	C.O. QUALSET	8	870987	87279	0	1	0	0	10
035		HANFORD WHEAT CULTIVAR #1	HANFORD, CA	K.D. BEATTY	19	870995	87279	1	0	0	0	12
036		HANFORD WHEAT CULTIVAR #2	HANFORD, CA	K.D. BEATTY	14	871014	87279	1	0	0	0	12

PBAR = NURSERY MEAN PROTEIN

051	EXP. 7126	TULELAKE, CA	QUALSET/LEVI	13	8713000	1	0	0	0	13
052	C.S./CHY DIALELL (EXP. 789)	DAVIS, CA	QUALSET/LEVI	27	871313	1	0	0	0	27
053	SWS LINES	OR	M. LEWIS	25	871340	0	1	0	0	25
054	ADVANCED HRW I	LIND, WA	E. DONALDSON	9	871365	1	0	0	0	9
055	ADVANCED HRW II	LIND, WA	E. DONALDSON	9	871374	1	0	0	0	9
056	ADVANCED HRW III	LIND, WA	E. DONALDSON	7	871383	1	1	0	0	7
057	ADVANCED HRW IV	LIND, WA	E. DONALDSON	7	871390	1	0	0	0	7
058	ADVANCED HRW V	LIND, WA	E. DONALDSON	3	871397	1	0	0	0	3
059	HARD RED WINTER WHEAT QUALITY COUNCIL	KANSAS	.	8	871400	1	0	0	0	8
060	STATE HRS	PULLMAN, WA	C.F. KONZAK	26	871408	1	0	0	0	26
061	ADVANCED HRS	PULLMAN, WA	C.F. KONZAK	9	871434	1	0	0	0	9
062	TRITICALE TEST	PULLMAN, WA	C.J. PETERSON	27	871443	0	1	0	0	27
063	IDAHO STANDARDS TEST	IDAHO	D. SUNDERMAN	19	871470	1	1	0	0	19
064	PRELIMINARY SWS QUALITY	PULLMAN, WA	C.F. KONZAK	28	871489	0	1	0	0	28
065	HARD RED SPRING 82 QUALITY/87	PULLMAN, WA	C.F. KONZAK	28	871517	1	0	0	0	28
066	HARD RED SPRING 83 QUALITY/87	PULLMAN, WA	C.F. KONZAK	30	871545	1	0	0	0	30
067	HARD RED SPRING 84 QUALITY/87	PULLMAN, WA	C.F. KONZAK	28	871575	1	0	0	0	28
068	HARD RED SPRING 85 QUALITY/87	PULLMAN, WA	C.F. KONZAK	32	871603	1	0	0	0	32
069	STATE SWS	PULLMAN, WA	C.F. KONZAK	23	871635	0	1	1	1	23
070	KNCNDM QUALITY	PULLMAN, WA	C.F. KONZAK	17	871658	0	0	0	0	17
071	PNW COLLABORATIVE STUDY	WA, ID	.	14	871675	1	1	1	1	14
072	RED RIVER 68 BIOTYPES	DAVIS, CA	D.D. KASARDA	2	871689	1	0	0	0	2
073	WESTERN REGIONAL SPRING WHEAT	ID, MT, WA	.	36	871691	1	1	1	1	36
074	WESTERN REGIONAL SOFT WHITE WINTER	ID, MT, OR, WA	.	35	871727	0	1	1	1	35
075	WESTERN REGIONAL HARD RED WINTER	ID, MT, WA	.	35	871762	1	0	0	0	35
076	LARGE SCALE DUAL PURPOSE	PULLMAN, WA	C.F. KONZAK	3	871797	1	1	1	1	3
077	PRELIMINARY WINTER WHEAT	LIND, WA	E. DONALDSON	146	871800	1	1	0	0	146
078	PETERSON'S WHITES	.	C.J. PETERSON	3	871949	1	1	0	0	3
079	CALIFORNIA LARGE SCALE TESTS	WALLA WALLA, WA	NELSON/PROCTOR	3	871953	0	1	0	0	3
080	NTN RANCH SOFT WHEATS	WALLA WALLA, WA	R.E. ALLAN	26	871956	0	1	0	0	26
081	ISOLINES	PULLMAN, WA	R.E. ALLAN	18	871982	0	1	1	1	18
082	AUSTRALIAN SPRING WHEAT	IN, MI, OH, WA	.	77	370001	0	1	1	1	77
083	EAST/WEST QUALITY STUDY	PULLMAN, LIND, WA	.	69	370078	1	1	1	1	69
084	DRILL STRIPS	PENDLETON, OR	C.R. ROHDE	23	370147	0	1	0	0	23
085	PRELIMINARY WINTER WHEAT	PENDLETON, OR	W.E. KRONSTAD	29	370170	0	1	1	0	29
086	SWW ELITE YIELD TRIAL	PENDLETON, OR	W.E. KRONSTAD	21	370199	1	0	0	0	21
087	SWW ELITE YIELD TRIAL	PENDLETON, OR	W.E. KRONSTAD	44	370220	1	0	0	0	44
088	HARD RED CROSSING BLOCK NURSERY	MADRAS, OR	W.E. KRONSTAD	22	370264	1	0	0	0	22
089	ARGENTINE YIELD TRIAL #1	MADRAS, OR	W.E. KRONSTAD	21	370286	1	0	0	0	21
090	ARGENTINE YIELD TRIAL #2	MADRAS, OR	W.E. KRONSTAD	22	370307	1	0	0	0	22
091	ARGENTINE YIELD TRIAL #3	MADRAS, OR	W.E. KRONSTAD	20	370329	1	0	0	0	20
092	ARGENTINE YIELD TRIAL #4	MADRAS, OR	W.E. KRONSTAD	31	370349	0	1	1	0	31
093	SWW REPLICATED ADVANCED	PENDLETON, OR	W.E. KRONSTAD	16	370380	1	0	0	0	16
094	HRW REPLICATED ADVANCED	PENDLETON, OR	W.E. KRONSTAD	35	370396	1	0	0	0	35
095	HRW REPLICATED PRELIMINARY	PENDLETON, OR	W.E. KRONSTAD	22	370431	1	0	0	0	22
096	HRS PRELIMINARY #1	MADRAS, OR	W.E. KRONSTAD	32	370431	1	0	0	0	32
097	HRS PRELIMINARY #2	MADRAS, OR	W.E. KRONSTAD	14	370453	1	0	0	0	14
098	HWS PRELIMINARY #1	MADRAS, OR	W.E. KRONSTAD	19	370467	1	0	0	0	19
099	HWS PRELIMINARY #2	MADRAS, OR	W.E. KRONSTAD	1	370486	1	0	0	0	1
100	SWW PRELIMINARY YIELD TRIAL	PENDLETON, OR	W.E. KRONSTAD	80	370505	1	0	0	0	80

ABBREVIATION DESCRIPTION

We have implemented a computer program to store, calculate, and retrieve our milling and baking data. The following is a list of abbreviations used as column headings in the following tables of data.

NURSCO - Nursery Code Number (located upper left corner of table).
 LABNUM - Laboratory Number (first two digits crop year).
 VAR - Variety or selection name.
 IDNO - CI or Selection Identification Number.
 TWT - Test weight in lbs/bu.
 FASH - Flour ash percent at 14% moisture basis.
 FYELD - Percent of flour obtained.
 MSCOR - Milling score.
 FPROT - Flour protein percent at 14% moisture basis.
 FABSC - Farinograph water absorption corrected to 14% moisture basis.
 FPEAK - Farinograph mixing peak time in minutes.
 FSTAB - Farinograph stability in minutes.
 BABS - Bake water absorption at 14% moisture basis.
 BABSC - Bake absorption corrected to mean protein of nursery.
 MTIME - Optimum mixing time in minutes.
 LVOL - Bread loaf volume observed in cc's.
 LVOLC - Bread loaf volume (cc) corrected for protein to the mean protein of the nursery. (See table 1 or 2, page ix)
 BCRGR - Bread crumb grain rating code. (See following CODE ratings & Meanings.)

CODE	MEANING
1	Excellent (S*)
2	Satisfactory (S)
3	(Q-S)
4	Questionable-Satisfactory (Q-S)
5	(Q-S)
6	Questionable (Q)
7	(Q-U)
8	Questionable-Unsatisfactory (Q-U)
9	Unsatisfactory (U)

CODI - Cookie diameter in cm's.
 CODIC - Cookie diameter (cm) corrected for protein to the mean protein of the nursery. (See table 1 or 2, page ix)
 VISC - Brookfield viscosity (observed)
 VISCC - Brookfield viscosity corrected for protein to the mean protein of the nursery.
 CAVOL - Japanese Sponge Cake Volume in cc's.
 SCSCOR - Sponge cake score (scale 1-100)
 WTIN - Noodle weight increase (percent).
 NYELD - Noodle yield.
 NOSCORE - Noodle score (1-100)
 MABS - Mixograph absorption at 14% moisture (%).
 MABSC - Mixograph absorption corrected for protein (%).
 MTYPE - Mixograph Type - From Mixograph Reference Chart. (See pages 7-8.)

RATE - Overall Rating when used see table 3.
 RMKS - Remarks.

Western Wheat Quality Laboratory

INTERPRETATION OF DATA

As in the past reports, decisions were based on the results of the tests after adjustment to an average protein content of the nursery using correction factors derived from several years of data on particular varieties and/or classes of wheat. These correction factors and scale for ranking codes can be found in the following tables 1-3.

CORRECTION FACTORS - TABLE 1

VTN	VARIETY	(VC) LOAF VOLUME	(CC) COOKIE
1	Anza	61	0
2	Burt	51	.078
3	Coulee	76	.070
4	Fortuna	64	0
5	Gaines	38	.136
6	Hyslop	0	.137
7	Inia 66	68	0
8	Itana	60	0
9	Kharkof	57	0
10	Luke	0	.085
11	Marfed	61	.098
12	McCall	52	0
13	McDermid	0	.106
14	Moro	0	.094
15	Nugaines	62	.118
16	Omar	0	.083
17	Paha	0	.037
18	Sprague	0	.062
19	Springfield	0	.042
20	Twin	0	.149
21	Yamhill	0	.124
22	Wanser	69	0
23	Wared	62	0

Variety name (VAR) not found or where the value is zero in Table 1, use correction factor for class of sample in Table 2.

VTN = Computer system variety number

CORRECTION FACTORS - TABLE 2

CLASS	(VC) LOAF VOLUME	(CC) COOKIE
SWW	60	.110
SWS	60	.110
CLUB	55	.071
HRW	62	.080
HRS	62	.080
HWW	62	.080
HWS	62	.080

RANKING AND RATING CODES - TABLE 3

CODE BREAD CRUMB GRAIN	MEANING
1	Excellent (S*)
2	Satisfactory (S)
3	(Q-S)
4	Questionable-Satisfactory (Q-S)
5	(Q-S)
6	Questionable (Q- S)
7	(Q)
8	(Q-U)
9	Questionable-Unsatisfactory (Q-U)
	Unsatisfactory (U)

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INTRODUCTION

This is the Fortieth Annual Report of the Western Wheat Quality Laboratory of cooperative investigations with breeder, geneticists, and pathologists in the seven Western states to evaluate the milling and baking quality characteristics of experimental wheat selections grown and harvested as the 1987 crop. These investigations included several market classes and sub-classes of wheat which are commercially grown in the Pacific Northwest and the Western region and relates to their quality for commercial production and consumer acceptance. These studies deal with the physical-chemical flour properties associated with a wheat's suitability for commercial pastry, noodle, and bread products.

The nurseries have been arranged in nurseries (Nursery Index in Table of Contents) and the varieties and selections are listed in the tables in order of their assigned Laboratory Number. Mixograms were run on all samples evaluated, but none were reproduced for inclusion in this report. Alternately, each mixogram was characterized by type as described in the Methods Section. A description of all methods used to determine physical/chemical, milling, and baking quality is provided in the following Methods Section.

1/ Research Food Technologist, Food Technologist, Physical Science Technician, Physical Science Technician, Biological Technician, and Clerk-Typists, respectively, U.S. Department of Agriculture, Agricultural Research Service, assigned to the Western Wheat Quality Laboratory, Wheat Genetics, Quality, Physiology and Disease Unit, Pullman, WA.

2/ Credit is due Garrison King, Washington State University Laboratory Technician II for the flour milling and physical-chemical determinations made on early generation material. This work was supported by grant funds from the Washington Wheat Commission/Washington State Department of Agriculture.

METHODS USED BY USDA, WESTERN WHEAT QUALITY LABORATORY

All wheat samples were fumigated when received with 800 cc methyl bromide/50 gal. drum overnight and then aerated, cleaned, scoured, test weight (1, Method 84-10) determined, sub-sampled for approximate analysis, and placed in the storeroom until experimentally milled by the follow methods:

Buhler Milling: All of the samples of Advanced and Regional Nurseries were milled on a Buhler, pneumatic, laboratory mill. The samples were tempered to a predetermined moisture content ranging from 14.0% to 16.0%, depending on the hardness and known flour-bolting properties. The harder wheats require the most water. Thus, the grain was conditioned so that the most rapid and most complete separation of endosperm could be made. The temper water contained a wetting agent (.1% Aerosol OT) to hasten moisture penetration and the tempered wheat was allowed to rest for 16-24 hours before milling to permit uniform distribution of the moisture. An additional 0.5% water was added 15-20 minutes prior to milling. The Buhler experimental mill schematic flow is shown in Figure 1.

All six flour streams were combined to make a straight-grade flour. The first and second break and first and second reduction streams were combined for a patent flour. All straight-grade flour was rebolted on a 120 stainless steel wire screen and blended thoroughly.

Flour Yield: The percent of the total products recovered as straight-grade white flour.

Milling Time: The minutes required to mill a 2000 gram sample with the Buhler experimental mill and obtain a normal separation of bran, shorts, and flour. Time is determined by visual observations and adjustments by an experienced miller.

Milling Score: Calculated as follows:

$$100 - [(80 - \text{flour yield}) + 50 (\text{flour ash} - .30) + .48 (\text{milling time} - 12.5) + .5 (65 - \% \text{ long patent}) + .5 (16 - \text{1st tempering moisture})]$$

Modified Quadrumat Milling Method: The preliminary nurseries were experimentally milled on Modified Quadrumat system (500 g). The procedure was described in the 27th Annual Report, Oct. 1976 (Pgs. 1-14). Conversion of the data to give a predicted Buhler flour yield and milling score was done with the following linear equations:

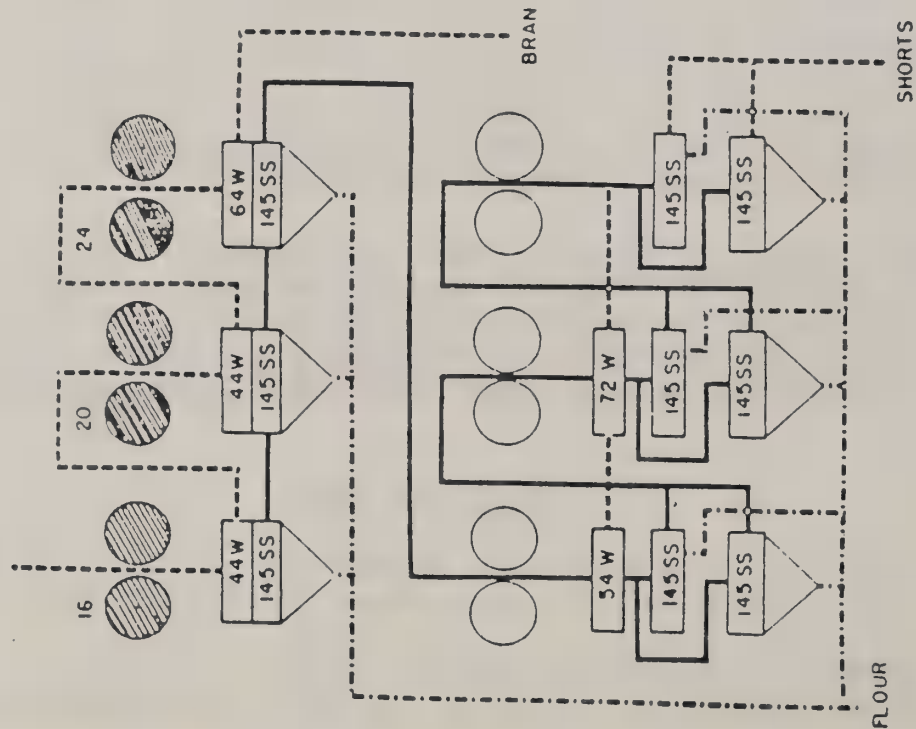
Flour YieldMilling Score

Soft Wheat ($y = 14.0671 + .83474X$)	Soft Wheat ($y = -21.60185 + 1.27367X$)
Hard Wheat ($y = 13.4166 + .83298X$)	Hard Wheat ($y = -3.43818 + 1.0448X$)

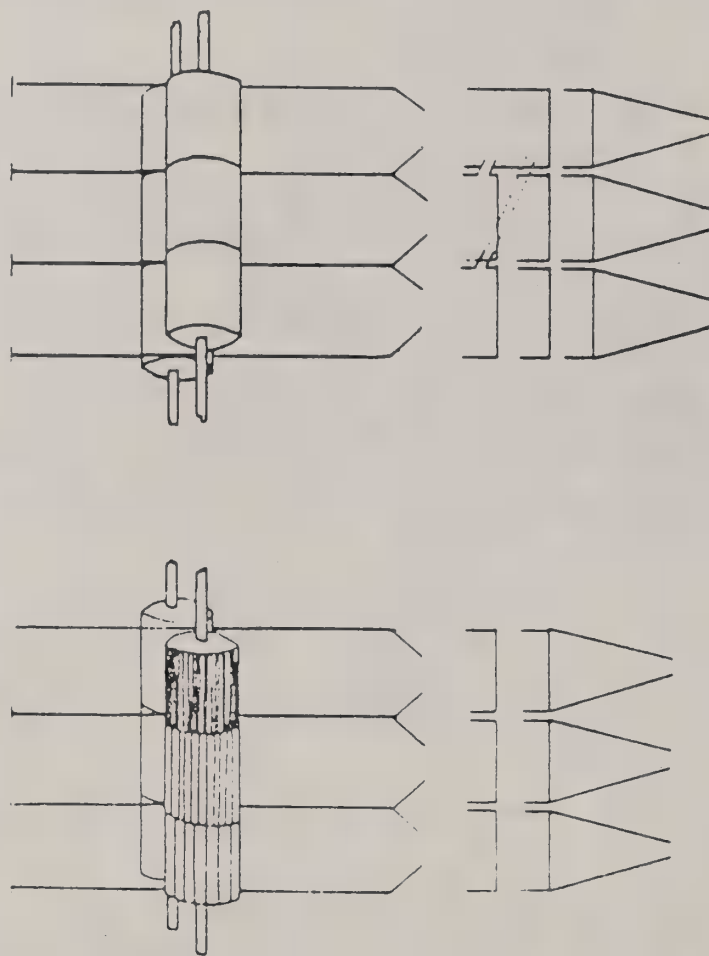
The Modified Procedure is schematically shown in Figure 2. Modifications include those described by Jeffers and Rubenthaler (11).

BUHLER EXPERIMENTAL MILL

Clean Tempered
Wheat



DIAMETER - 6 INCHES
ROLLS: DIFFERENTIAL - 2 TO 1
SURFACE - 300 SQUARE INCHES
BOLTING SURFACE - 288 SQUARE INCHES

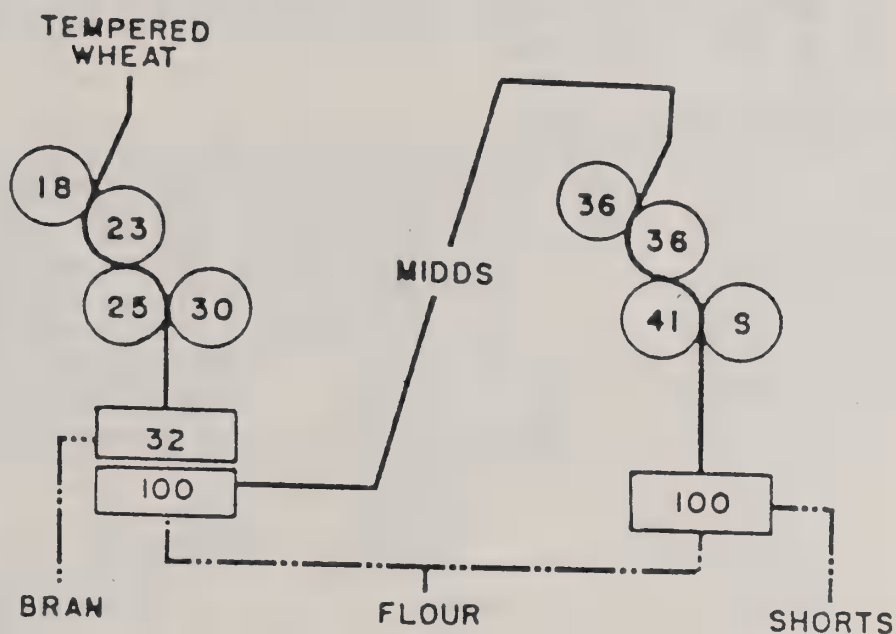


WHEAT TYPE	FEED RATE (G./MIN.)	FLOUR YIELD (%)	FLOUR ASH (%)
WHITE CLUB	145 - 160	73 - 75	0.39 - 0.41
HARD RED WINTER	115 - 130	68 - 73	.35 - .42
COMMON (SOFT) WHITE	90 - 120	67 - 72	.35 - .43

* BASIS TOTAL PRODUCTS RECOVERED FROM MILL
** ASH CONTENT OF STRAIGHT-GRADE FLOUR

Figure 1. Schematic flow of the Buhler experimental mill showing a range of the average feed rates, flour yields, and flour ash of the various classes of wheat. Roll settings are varied for optimum clean-up and reduction of the stock, and feed rates according to the bolting and reduction properties.

MODIFIED QUADRUMAT SR. MILLING PROCEDURE



BREAK UNIT

BRABENDER QUADRUMAT JR. WITH
QUADRUMAT SR BREAK ROLLS

REDUCTION UNIT

BRABENDER QUADRUMAT SR.
REDUCTION HEAD

ROLLS:

DIAMETERS: 2.8 INCHES

SPEED:

FAST ROLLS: 1200 RPM

SLOW ROLLS: 560 RPM

DIFFERENTIAL: 2.14 TO 1

TEMPER:

TO 15% FOR 24 HOURS WITH
WETTING AGENT

SIFTERS: 8 INCH TYLER TESTING
SIEVES ON ZELENY SEDIMENTATION
SIEVE SHAKERS

SIFTING SCHEDULE

BREAK STOCK:

BRAN: REMOVED AFTER 1 MIN.

MIDDLINGS: REMOVED AFTER AN
ADDITIONAL 2 MIN. (3 MIN. TOTAL)

REDUCTION STOCK: 3 MIN.

SAMPLE SIZE: 100-250 GRAMS TEMPERED WHEAT
(HELD CONSTANT WITHIN EACH COMPARISON GROUP)

OUTPUT: 5-7 SAMPLES PER HOUR

Figure 2. Semi micro experimental mill flow with the roll corrugations per inch. The break rolls have corrugation spirals of 1.25, 1.75, 1.88, and 1.25 inch/ft. in progressive order, and the middling reduction roll spirals are 1.25, 1.25, 1.25, and frosted smooth. Roll spacings for first, second and third break are 0.035, 0.0035, and 0.002 inch respectively. The middling rolls are set at 0.0015, 0.0020 and 0.0015 inch respectively.

Semi Micro Flour Quality:* Wheats milled on the semi-micro mill which gave satisfactory flour yields were evaluated by the following tests and all others with unsatisfactory milling properties were discarded: NIR protein, mixograph (3, 9), and AWRC test (14,18) to distinguish whether they fit the sub-class of club or soft common and/or hard wheats.

Micro Milling of Single Plant Selections:* The 5-10 gm samples of grain were accurately weighed, placed in vials, and water added to bring them to 14% moisture. The tempered grain was milled on the micro mill which consists of two pairs of corrugated rolls and double sifters with 38- and 135-mesh stainless steel screens. The bran over the 38-mesh sifters was evaluated for milling properties by visual examination for the degree of bran clean-up. The throughs of the 135-mesh stainless steel screen, of those samples considered to be good milling types, were examined for flour quality by means of the Modified Micro Sedimentation Method (12). Protein and lysine are determined on these materials by NIR analysis (17). A schematic flow diagram of the micro mill is shown in Figure 3 (2, 13).

Moisture Content of Wheat & Flour: These values have not been given in these reports, but the methods are as follows: The reference test is two grams of ground wheat in an aluminum moisture dish are heated in a forced draft oven for 40 minutes at 140° C., allowed to cool in a desiccator and weighed. Flour Moisture is determined in the same manner except that it is heated only 20 minutes. The NIR (Technicon 400) is routinely used as calibrated to the above method.

Ash of Wheat and of Flour: The ash from a 4-gram sample of wheat meal or flour heated for 15 hours at 550° C. in a muffle furnace. (1, Method 08-01).

Protein of Wheat and Flour: The protein content of the samples was determined by the NIR method, and checked (about 10% of the material) by the Kjeldahl method (1, Method 46-12).

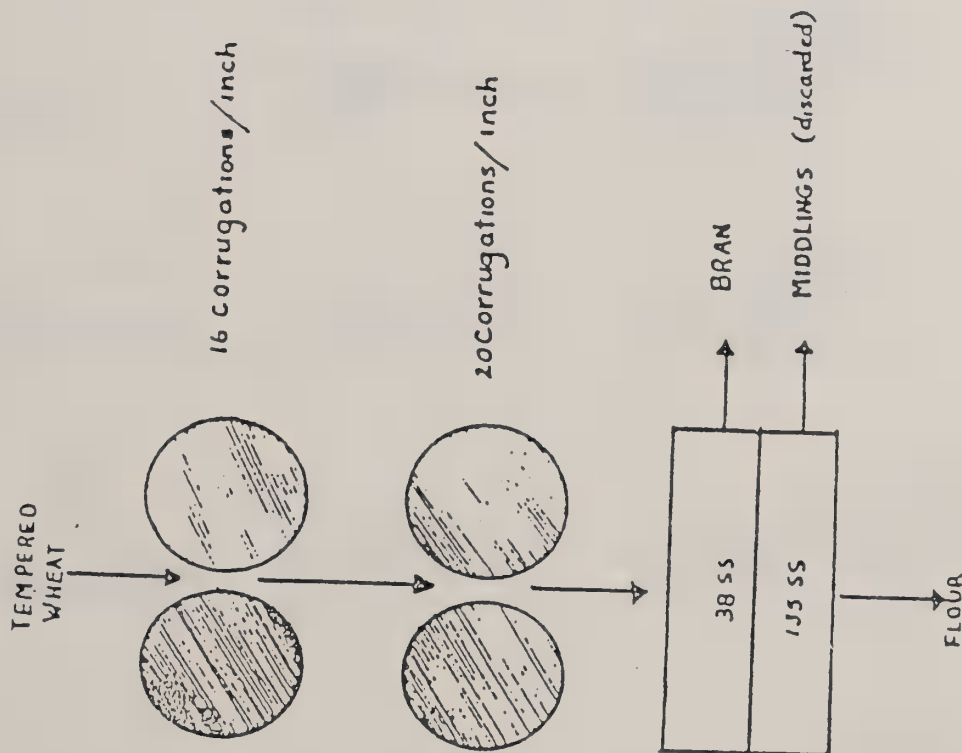
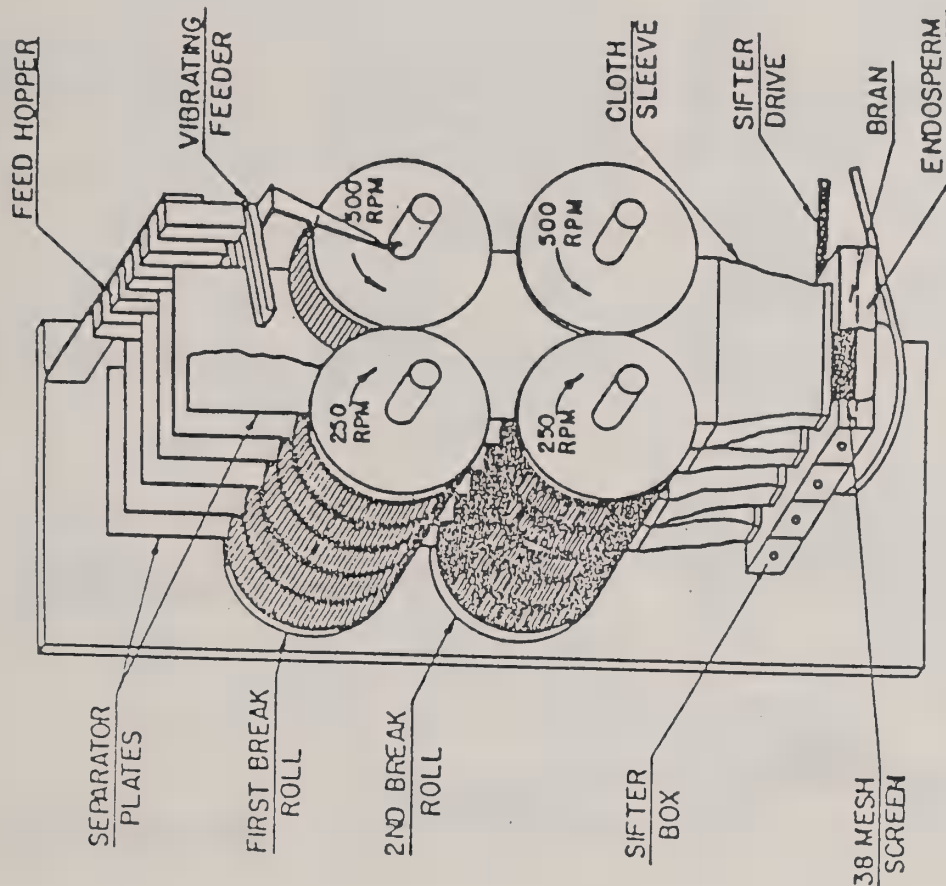
Alkaline Water Retention Capacity (AWRC): The percent increase in weight of 7.5 g flour due to absorption of water from 35 ml of .1 normal NaHCO_3 solution (18).

Viscosity: Dial reading x 7.5 of a RVT Brookfield Synchro-Lectric Viscometer fitted with a No. 2 spindle at 50 R.P.M. using a suspension of 20 grams of flour in 100 ml of water and 7 ml of 1 N lactic acid (15).

Mixogram: Used to characterized new selections as to market class and estimate baking properties. The recently developed 10 gm instruments were used and the testing procedure and interpretation of K.F. Finney(9) was followed. To reduce the time and expense involved in reproducing the mixograms a reference chart was developed to characterize each curve as to type ranging from very weak to exceptionally long and strong types. The chart and instructions for its use are found on pages 7 and 8.

*Supported by special grant of funds from the Washington Department of Agriculture and the Washington Wheat Commission to permit extensive early generation (F_3 - F_4) testing.

MICRO-MILL FLOW



ROLL SPACING 18 .012 INCH
28 .0025 "

Figure 3. Schematic and flow of the micro experimental mill. Four samples are milled and sifted simultaneously and feed rate is held constant by a vibratory feeder.

USE OF MIXOGRAM REFERENCE CHART

In addition to determining mixing time for optimum dough development by observation during baking test, mixing time and mixing tolerance, two important baking properties of wheat flour can be determined independently from a mixogram. A mixogram is determined with 10 g of flour and appropriate amount of water to give optimum absorption. It is really nothing more than a recording mixer reflecting the resistance the dough has to be mixed over a period of time. Most mixograms are run either 7 or 8 minutes which is sufficient time for most flours to give a full picture of their mixing time and to show what happens when mixing continues beyond this point (mixing peak) as reflected in the tail of the curve and commonly referred to as tolerance.

Final evaluation must be made with consideration given to the protein content of the flour because of the effect protein content has on the mixing characteristics within the same variety. As protein increases, mixing time will decrease with an apparent increase of tolerance. To illustrate this, compare #1 high (H) with #2 medium (M) and #3 low (L) which are typical mixograms of the club wheat Paha at 12, 9, and 6% protein respectively. Similarly, 2H, 3M, and 4L are typical for Nugaines at these protein levels. Little change can be observed on any wheat above 13.0 or below 7.5% protein.

This chart will be used to identify the curve characteristics which most closely fit the sample and will be reported as numbers 1L, 1M, 1H, etc. through 8H.

MIXOGRAM REFERENCE CHART

LOW

MEDIUM

HIGH

6-9%

9-11%

11-13%

1

2

3

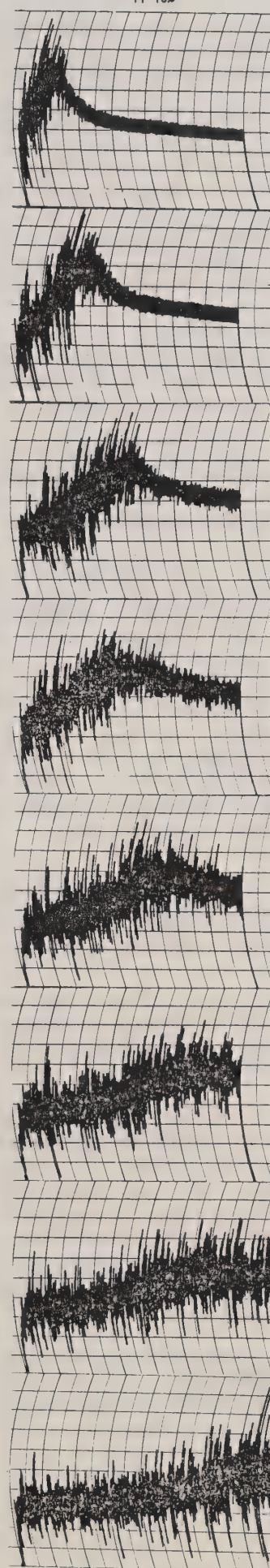
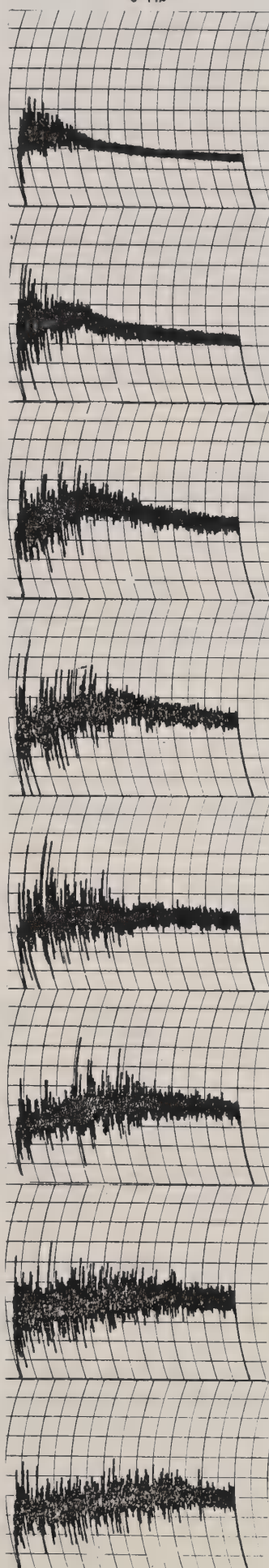
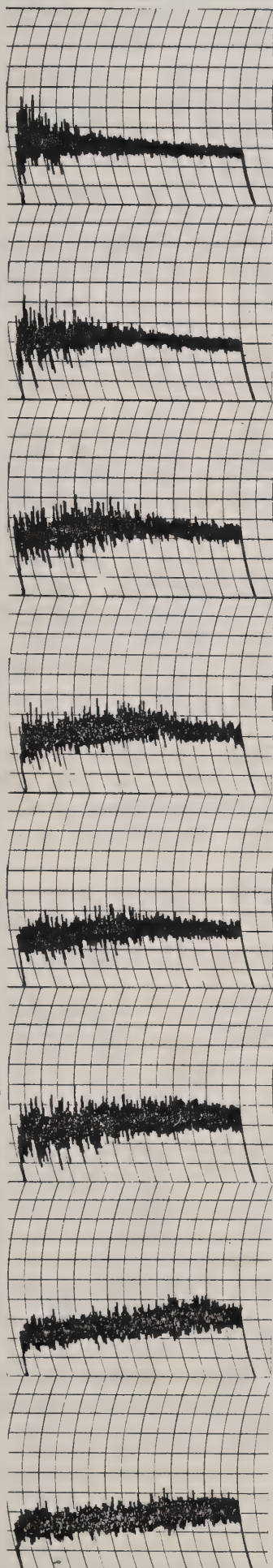
4

5

6

7

8



Cookie Baking: 40 g of flour, micro method, using 25% absorption, 60% sugar, 30% emulsified shortening, 3% dry skim milk, 1% NH_4HCO_3 , 1% NaCL, 1% NaHCO_3 , was employed (8).

Cookie Diameter is the average diameter, in centimeters, of cookies baked on two separate days.

Farinograph: The Farinograph was equipped with a 50-g bowl and the Constant Flour Weight Procedure was employed (1, Method 54-21A).

Farinograph Absorption is the amount of water required to center the highest portion of the Farinograph curve on the 500 unit line.

Peak or Farinograph Mixing Time is the time interval, in minutes, from the first addition of water until the tip of the curve reaches its maximum height.

Stability of Period of Resistance is the number of minutes the top of curve remains above the 500 unit line when the highest portion (peak) is centered on the 500 unit line.

Bread Baking: An optimum absorption, optimum mixing, optimum bromate, 100 g flour and straight dough method using 7.2% yeast, 1 1/2% salt, 6% sugar, 1/4% malt extract, 4% dry milk solids, 65 ppm ascorbic acid, and 3% hydrogenated shortening was employed (5,6,7,10).

Baking Absorption: The amount of water required to make a dough of proper consistency for bread baking when mixed to optimum conditions as judged by an experienced baker using the baking method described above (4).

Mixing Time: Time in minutes required to mix the flour and the other bread dough constituents to the optimum condition as judged by an experienced baker (5).

Optimum Bromate: The amount of potassium bromate required to produce the optimum break, shred, crust, and grain characteristics of the loaf of bread (5).

Flour Color: The slurry method using 20 g of flour, 25 ml of water, stirred for 2 minutes with a glass stirring rod fitted with a 11mm policeman, and allowed to stand for 5 minutes. Reading is taken on an Agtron (F_2) calibrated with standard color discs #63 = 0 and #85 = 100.

Japanese Sponge Cake Baking: 100 g flour, 100 g sugar, 100 g fresh egg, 40 g water (16).

Udon Noodle Making 300 g flour, 4.5 g NaCL, 96 g water with doughs and noodles prepared with a Otake Laboratory Noodle Machine (16).

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PUBLICATIONS
(Jan. 1 - Dec. 31/88)

- Francios, L.E., Donovan, T.J., Maas, E.V., and Rubenthaler, G.L. 1988 Effects of Salinity on Grain Yield and Quality, Vegetative Growth, and Germination of Triticale. Agron. J. 80:642-647.
- Chen, H., Rubenthaler, G.L., and Schnus, E.G. 1988 Effects of Cellulose on the Physical Properties of Gluten. J. Food Sci. 53:1:304, 1988.
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- Bassett, L.M., Allan, R.E., and Rubenthaler, G.L. Environment of Genotype Interactions and Their Effect on Soft White Winter Wheat Quality. Agronomy Journal. Submitted 1988.
- Rubenthaler, G.L. 1988 Soft Wheat - View from the Western United States. Cereal Foods World. 33:8 Abstract.
- Bettge, A.D., Rubenthaler, G.L., and Pomeranz, Y. 1988 Air-aspirated Wheat Cleaning. Cereal Foods World. 33:8 Abstract.
- Rubenthaler, G.L., Huang, M.L., and Pomeranz, Y. 1988 PNW Wheats in Production of Chinese Steamed Bread. Cereal Foods World. 33:8 Abstract.
- Czuchojawska, Z., Pomeranz, Y., and Rubenthaler, G.L. 1988 Pacific Northwest Wheats as a source of gluten and starch. Cereal Foods World. 33:8 Abstract.
- Bettge, A.D., Rubenthaler, G.L., and Pomeranz, Y. 1988 Alveograph Algorithms to Predict Functional Properties of Wheat in Bread- and Cookie-making. Cereal Chem. 1988 In Press.
- Toyokawa, H., Rubenthaler, G.L., Powers, J.R., and Schanus, E.G. Japanese Noodle Qualities as Affected by: I. Flour Components. Cereal Chem. Submitted 1988.
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- Hong, B.H., Rubenthaler, G.L., and Allan, R.E. Estimation of Grain Hardness and Pentosan Level by Near Infrared Reflectance Spectroscopy of the Different Market Classes of Wheat. Cereal Chem. Submitted 1988.
- Hong, B.H., Rubenthaler, G.L., and Allan, R.E. Grain Pentosan Levels of Different Wheat Cultivars and Their Relationship to Grain Hardness. Cereal Chem. Submitted 1988.

INVITED TECHNICAL PRESENTATIONS

Rubenthaler, G.L., 1988

Wheat Quality Assessment Meeting, Beltsville, MD, Jan. 28-29/88. Presented talk "Variety Evaluation - Soft White Wheat" to U.S. Wheat Research people attending the meeting called by NPS.

Washington State University Dept. of Agronomy and Soils, Pullman, WA, Feb. 1/88. Presented a seminar "Wheat Quality/Variety Development" to faculty and graduate students.

Washington Wheat Commission Wheat Research Review, Pullman, WA, Feb. 2/88. Presented a progress report "Quality Tests for Early Generation Selections" to wheat growers and commissioners.

Washington State University, Agronomy & Soils Dept., Pullman, WA, Feb. 9/88. Presented a tour of laboratory and a talk "Role of the Western Wheat Quality Lab in Variety Development" to Cereals Production class.

Peoples Republic of China Seed Production Team, Pullman, WA, Feb. 26/88. Presented a tour of lab and seminar "Role of the Western Wheat Quality Laboratory."

Oregon State Co-operative Extension Service, March 28/88. Presented a tour and seminar "What is Soft White Wheat Quality?"

Washington State University, Dept. of Food Science & Human Nutrition, Pullman, WA, April 4/88. Presented a lecture "The Making of Oriental Noodles" to Cereal Products class.

Washington State University, Dept. of Food Science & Human Nutrition, Pullman, WA, April 7/88. Presented a demonstration and talk "Principles of NIR Analysis" to Food Analysis class.

Continental Baking Company, Mr. Robert Morris, Vice-President for Technical Affairs, St. Louis, Mo, April 27/88. Presented a tour of the Laboratory and discussed the attributes of the mixograph in flour quality analysis.

Wheat Marketing Center, Portland, OR, May 11/88. Presented a report for the Facilities Planning Committee to Directors of the Building/Facilities.

Whitman County Food Service Annual Meeting, Colfax, WA, May 17/88. Presented a talk "Wheat and Its Uses in the PRC" to the school lunch program workers.

Washington State University, Dept. of Agronomy and Soils, Dryland Research Center, Lind, WA, June 23/88. Prepared a display and demonstration at the Field Day on "Dual-purpose wheat."

Washington State University, Dept. of Agronomy and Soils, Cereals Field Day, Pullman, WA, July 7/88. Prepared a display and gave a demonstration talk on "Dual-Purpose Wheats."

International Grains Program, Kansas State University, Manhattan, KS, July 22/88. Gave lecture on "The Quality Characteristics of Soft White Wheat and Their Uses" to 20 foreign flour mill participants.

University of Idaho, International Programs, Aug. 3/88. Tour of Laboratory and discussion of "Soft White Wheat Quality" to a group of Indonesian participants.

Middle Eastern Flour Milling Team (Iraq & Yemen) Pullman, WA, Aug. 9/88. "The Quality of PNW Soft White Wheats as related to Their Uses", seminar was followed by a tour of the Laboratory and WSU IMPACT projects.

Wheat Marketing Center, Portland, OR, Aug. 11-12/88. Review of equipment and building facilities committee report.

Cooperative project with Japanese Flour Milling Association and PNW Wheat Commissions in the study of "Wheat Quality Influence, Variety x Location", Aug. 18-Oct. 6/88. Mr. Kino, Visiting Scientist at WWQL.

Moroccan Flour Milling Team/USWA, Pullman, WA, Sept. 30/88. Presented a seminar on "PNW Soft Wheat Quality" and gave the group a tour of the Laboratory.

Presented a paper at Symposium - AACC 73rd Annual Meeting, San Diego, CA. "Soft Wheat - View from the Western United States." Oct. 11, 1988.

Presented a paper at AACC 73rd Annual Meeting, San Diego, CA. "PNW Wheats in Production of Chinese Steamed Bread." Oct. 12, 1988.

Presented a report at PNW-AACC Annual Convention and Technical Conference, Seattle, WA. "1988 Soft White Wheat Quality." Oct. 21, 1988.

Presented a lecture to WSU Agronomy and Soils Dept. graduate class "Improving Crop Quality." Nov. 3, 1988.

Presented a talk at the Pacific Northwest Grains Council annual meeting, Portland, OR. "Crop Quality and Trends in Protein Content Over the Last 50 Years." Nov. 22, 1988.

Presented a paper at the Oregon Wheat Growers League 61st Annual Convention, Portland, OR. "Soft White Wheat Domestic Uses." Nov. 27, 1988.

Bettge, A.D., 1988

Presented a paper at the AACC 73rd Annual Meeting, San Diego, CA.
"Alveograph Algorithms to Predict Functional Properties of Wheat
in Bread- and Cookie-Making." Oct. 12, 1988.

Presented a paper at the AACC 73rd Annual Meeting, San Diego, CA.
"Air-Aspirated Wheat Cleaning." Oct. 13, 1988.

Western Wheat Quality Laboratory
1987 Crop

VISITORS

The Western Wheat Quality Laboratory Staff was pleased to have had the opportunity to meet, discuss, and give tours of our facilities with many visitors this past year. Several of these people were wheat breeders, grain buyers, flour millers, students and various government officials with an interest in wheat quality. The following is a list, not all inclusive, of those who visited our facilities:

U.S. Wheat Workers	15
<u>Foreign:</u>	
Australia	3
Indonesia	4
Iraq	2
Japan	5
People's Republic of China	5
Morocco	5
Yemen	2

NURSCO 1

DAVIS, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870001 1			HWS	60.4	65.5	0.40	79.8	14.8	64.5	2M
870002 2			HWS	60.4	63.2	0.38	78.6	13.2	64.6	2M
870003 3			HWS	62.4	65.4	0.35	82.6	11.3	64.2	3L
870004 4			HWS	62.0	64.6	0.34	82.1	11.3	64.4	2L
870005 5			HWS	61.2	64.9	0.38	80.3	12.6	63.8	4L
870006 6			HWS	61.6	64.8	0.33	83.0	11.8	61.7	3L
870007 7			HWS	60.8	63.9	0.36	80.3	12.3	64.1	2M
870008 8			HWS	61.6	64.6	0.32	83.3	12.1	63.2	2M
870009 9			HWS	62.0	65.8	0.31	85.1	11.6	63.9	2M
870010 10			HWS	62.8	64.8	0.32	83.5	11.9	62.3	1M
870011 11			HWS	62.0	63.2	0.34	80.5	12.7	63.0	1M
870012 12			HWS	62.0	63.5	0.33	81.7	12.2	62.3	1M
870013 13			HWS	62.4	66.5	0.30	86.2	11.0	62.5	1L
870014 14			HWS	62.8	65.3	0.28	86.0	11.0	61.3	1L
870015 15			HWS	62.0	67.5	0.34	85.3	12.9	62.8	2M
870016 16			HWS	62.0	68.7	0.34	86.5	13.2	61.5	1M
870017 17			HWS	62.0	69.2	0.32	87.9	12.1	61.3	2M
870018 18			HWS	62.0	68.0	0.34	85.8	12.9	60.9	2M
870019 19			HWS	61.6	64.2	0.34	81.6	12.5	62.2	1M
870020 20			HRS	61.2	63.9	0.33	81.9	12.4	61.3	1M
870021 21			HRS	64.0	72.5	0.34	90.5	10.2	63.3	3M
870022 22			HRS	64.8	73.5	0.33	91.7	12.3	60.4	2M
870023 23			HRS	64.4	73.5	0.34	91.2	10.3	62.5	2M
870024 24			HRS	60.0	69.7	0.33	87.7	12.3	64.7	5H
870025 25			HRS	60.8	69.2	0.36	85.7	12.0	64.9	5H
870026 26			HRW	60.4	69.6	0.33	87.9	12.3	64.9	5H
870027 27			HRW	63.6	71.7	0.42	85.6	11.9	65.7	5H
870028 28			HRW	63.2	71.2	0.41	85.3	11.6	65.0	5H
870029 29			HRS	63.2	71.1	0.41	85.0	12.0	66.2	4H
870030 30			HRS	62.8	71.0	0.40	85.8	11.8	65.7	8H
870031 31			HRS	64.0	70.9	0.41	85.2	11.1	66.6	8H
870032 32			HWS	63.2	70.8	0.53	78.9	11.7	64.9	8H
870033 33			HWS	60.8	63.2	0.33	80.9	13.6	65.6	2M
870034 34			HWS	61.6	63.7	0.32	82.0	12.4	63.9	2M
870035 35			HWS	61.6	64.4	0.33	82.2	11.5	64.2	2M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 1

DAVIS, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/ 3/	MSCOR	FPROT 1/ 3/	MABSC	MTYPE
870036 36			HWS	62.0	65.5	0.34	82.9	11.9	62.9	1M
870037 37			HWS	61.6	65.8	0.30	85.6	11.0	64.9	2M
870038 38			HWS	62.4	67.5	0.33	85.5	12.2	63.1	2M
870039 39			HWS	62.0	67.5	0.31	86.4	11.9	64.5	2M
870040 40			HWS	62.4	67.9	0.32	86.8	12.0	62.1	2M
870041 41			HWS	61.6	67.4	0.33	85.6	12.0	64.2	2M
870042 42			HWS	61.6	67.6	0.33	85.5	12.1	65.4	1H
870043 43			HWS	62.0	65.7	0.34	83.1	12.1	64.7	2M
870044 44			HWS	62.0	65.5	0.34	83.1	11.7	62.6	1M
870045 45			HWS	60.8	65.2	0.34	82.6	11.9	62.8	3L
870046 46			HWS	61.6	65.1	0.35	82.2	12.2	61.8	2L
870047 47			HWS	59.2	63.4	0.38	78.5	14.1	64.1	2M
870048 48			HWS	61.6	66.1	0.34	83.8	12.5	61.4	1M
870049 49			HWS	62.8	65.7	0.33	83.7	11.6	61.8	2L
870050 50			HWS	62.4	64.6	0.32	83.3	12.4	60.6	2L
870051 51			HWS	63.6	66.1	0.30	85.5	11.3	62.2	3L
870052 52			HWS	62.4	65.9	0.29	86.2	11.3	61.0	2L
870053 53			HWS	62.4	67.2	0.37	83.3	11.9	63.0	3L
870054 54			HWS	62.4	67.3	0.32	86.0	11.8	61.4	2L
870055 55			HWS	62.0	66.9	0.31	85.9	11.9	61.7	2M
870056 56			HWS	62.0	65.3	0.31	84.2	12.3	63.2	2M
870057 57			HWS	61.6	65.0	0.32	83.6	12.3	60.5	2L
870058 58			HWS	62.0	63.9	0.32	82.3	12.1	61.5	3L
870059 59			HWS	60.4	63.2	0.35	79.9	13.3	60.9	1M
870060 60			HWS	61.2	63.8	0.32	82.3	12.5	60.3	1M
870061 61			HWS	61.2	64.2	0.31	83.0	12.0	60.9	2M
870062 62			HWS	62.0	65.7	0.33	83.7	12.7	61.4	2M
870063 63			HWS	61.6	65.5	0.30	85.0	11.0	58.9	1M
870064 64			HWS	62.8	66.6	0.29	87.0	10.7	60.0	2L
870065 65			HWS	62.0	66.5	0.31	85.4	12.0	59.9	1M
870066 66			HWS	66.0	66.2	0.31	85.5	11.9	61.0	2M
870067 67			HWS	61.6	66.6	0.35	83.8	11.8	59.2	1M
870068 68			HWS	62.4	66.7	0.35	83.8	12.1	60.7	2M
870069 69			HWS	61.2	64.2	0.25	86.3	11.9	59.8	1M
870070 70			HWS	61.2	64.5	0.31	83.5	12.0	60.7	2M

NURSCO 1

DAVIS, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>	<u>*/</u>	
870036 36			HWS	62.5	62.6	1.2	830	836	9 +1	
870037 37			HWS	63.6	64.6	1.7	825	887	8	
870038 38			HWS	63.0	62.8	1.4	900	888	7	
870039 39			HWS	64.1	64.2	1.5	885	891	7	
870040 40			HWS	61.8	61.8	1.5	860	860	7	
870041 41			HWS	63.9	63.9	1.5	850	850	7	
870042 42			HWS	65.2	65.1	1.4	860	854	8	
870043 43			HWS	64.5	64.4	1.3	870	864	8	
870044 44			HWS	62.0	62.3	1.4	825	844	9	
870045 45			HWS	62.4	62.5	2.1	880	886	9	
870046 46			HWS	61.7	61.5	1.8	855	843	8	
870047 47			HWS	65.9	63.8	1.4	910	780	8	
870048 48			HWS	61.6	61.1	1.7	890	859	8	
870049 49			HWS	61.1	61.5	1.9	860	885	7	
870050 50			HWS	60.7	60.3	1.7	865	840	8	
870051 51			HWS	61.2	61.9	2.0	835	878	8	
870052 52			HWS	60.0	60.7	1.7	765	808	9	
870053 53			HWS	62.6	62.7	2.1	820	826	9	
870054 54			HWS	60.9	61.1	1.9	780	792	9	
870055 55			HWS	61.3	61.4	1.8	710	716	9	
870056 56			HWS	63.2	62.9	1.7	790	771	9	
870057 57			HWS	61.5	61.2	1.8	820	801	9	
870058 58			HWS	62.3	62.2	1.9	805	799	7	
870059 59			HWS	62.9	61.6	1.4	840	759	8	
870060 60			HWS	61.5	61.0	1.3	820	789	8	
870061 61			HWS	61.6	61.6	1.4	785	785	9	
870062 62			HWS	62.8	62.1	1.5	800	757	9	
870063 63			HWS	58.6	59.6	1.3	720	782	9	
870064 64			HWS	59.4	60.7	1.5	700	781	9 +1	
870065 65			HWS	60.6	60.6	1.4	790	790	9 +1	
870066 66			HWS	61.6	61.7	1.5	805	811	9	
870067 67			HWS	59.7	59.9	1.4	775	787	8	
870068 68			HWS	61.5	61.4	1.5	785	779	9	
870069 69			HWS	60.4	60.5	1.3	795	801	9 +1	
870070 70			HWS	60.9	60.9	1.4	825	825	8	

* / Bread Crumb was an additional point or two poorer than very unsatisfactory.

NURSCO 1

DAVIS, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870071 71	HWS			61.6	63.6	0.34	81.2	13.4	58.6	1M
870072 72	HWS			62.0	64.1	0.33	82.2	12.6	59.4	1M
870073 73	HWS			60.8	61.9	0.33	79.5	13.6	58.4	1M
870074 74	HWS			62.0	64.9	0.29	85.2	12.1	59.6	1M
870075 75	HWS			60.8	65.3	0.33	83.2	13.5	57.8	1M
870076 76	HWS			62.0	66.2	0.35	83.2	12.8	58.4	1M
870077 77	HWS			60.4	65.4	0.37	81.3	14.8	57.7	2M
870078 78	HWS			61.2	65.1	0.33	83.0	13.2	58.1	2M
870079 79	HWS			60.8	63.2	0.35	80.0	14.1	57.2	2M
870080 80	HWS			61.6	59.6	0.29	79.3	12.6	59.2	2M
870081 81	HWS			62.8	65.2	0.30	84.9	11.2	59.2	1M
870082 82	HWS			62.4	65.5	0.29	85.6	11.2	58.8	1M
870083 83	HWS			62.8	66.8	0.30	86.2	12.2	58.7	1M
870084 84	HWS			62.4	65.9	0.31	84.9	12.4	58.5	1M
870085 85	HWS			62.8	66.3	0.32	85.0	12.5	59.7	2M
870086 86	HWS			62.0	65.4	0.36	81.6	12.8	58.7	1M
870087 87	HWS			61.6	63.2	0.32	81.8	12.4	58.9	1M
870088 88	HWS			62.0	58.8	0.29	78.5	12.2	59.7	1M
870089 89	HWS			62.4	67.4	0.29	87.6	11.0	59.7	1M
870090 90	HWS			62.8	67.5	0.29	87.6	11.8	58.7	1M
870091 91	HWS			62.4	66.8	0.30	86.3	11.6	59.4	1M
870092 92	HWS			62.8	67.7	0.32	86.5	11.7	58.9	1M
870093 93	HWS			62.0	66.8	0.30	86.4	10.9	59.4	1M
870094 94	HWS			62.4	65.7	0.30	85.3	11.5	58.9	1M
870095 95	HWS			62.0	69.8	0.33	87.9	12.8	58.3	2M
870096 96	HWS			61.6	69.5	0.32	88.4	12.7	57.9	2M
870097 97	HWS			62.4	67.0	0.31	86.2	12.2	59.1	2M
870098 98	HWS			62.4	67.5	0.36	83.9	12.7	57.4	2M
870099 99	HWS			61.6	66.7	0.33	84.5	13.0	58.0	2M
870100 100	HWS			62.0	67.0	0.34	84.8	13.2	57.6	2M
870101 101	HWS			60.4	65.7	0.37	81.7	14.2	59.8	1H
870102 102	HWS			60.4	63.1	0.35	79.8	13.6	59.6	2M
870103 103	HWS			62.0	65.1	0.32	83.4	11.8	60.0	2M
870104 104	HWS			62.8	65.7	0.33	83.8	11.7	59.1	2M
870105 105	HWS			61.2	57.9	0.33	75.5	12.0	60.1	3L

NURSCO 1		DAVIS, CA			QUALSET/LEVI					
LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	* / RMKS
					3/			4/		
870071 71			HWS	60.7	59.3	1.1	815	728		9
870072 72			HWS	60.7	60.1	1.1	785	748		8
870073 73			HWS	60.7	59.1	1.2	785	686		9
870074 74			HWS	60.4	60.3	1.2	780	774		9
870075 75			HWS	60.0	58.5	1.2	795	702		7
870076 76			HWS	59.9	59.1	1.2	790	740		8
870077 77			HWS	61.2	58.4	1.2	775	601		9
870078 78			HWS	60.0	58.8	1.2	780	706		8
870079 79			HWS	60.0	57.9	1.0	755	625		9
870080 80			HWS	60.5	59.9	1.3	825	788		9
870081 81			HWS	59.6	60.4	1.3	720	770		9+2
870082 82			HWS	58.7	59.5	1.1	730	780		9+1
870083 83			HWS	59.6	59.4	1.0	790	778		9
870084 84			HWS	59.6	59.2	1.0	845	820		9
870085 85			HWS	60.9	60.4	1.1	815	784		9
870086 86			HWS	60.7	59.9	1.2	775	725		9
870087 87			HWS	60.0	59.6	1.2	780	755		9
870088 88			HWS	63.6	63.4	1.1	745	733		9+1
870089 89			HWS	59.4	60.4	1.5	765	827		9
870090 90			HWS	59.2	59.4	1.4	785	797		9
870091 91			HWS	59.7	60.1	1.4	805	830		8
870092 92			HWS	59.3	59.6	1.4	750	769		9
870093 93			HWS	59.0	60.1	1.4	790	858		9
870094 94			HWS	59.1	59.6	1.3	790	821		9+1
870095 95			HWS	59.8	59.0	1.4	780	730		9
870096 96			HWS	59.3	58.6	1.5	745	702		9
870097 97			HWS	60.0	59.8	1.3	770	758		8
870098 98			HWS	58.8	58.1	1.5	745	702		9
870099 99			HWS	59.7	58.7	1.2	795	733		9
870100 100			HWS	60.5	59.3	1.3	790	716		9
870101 101			HWS	63.7	61.5	1.3	945	809		9
870102 102			HWS	62.9	61.3	1.5	955	856		6
870103 103			HWS	61.5	61.7	1.4	845	857		8
870104 104			HWS	60.5	60.8	1.7	735	754		9
870105 105			HWS	61.3	61.3	2.4	785	785		8

* / Bread crumb was an additional point or two poorer than very unsatisfactory.

NURSCO 1

DAVIS, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
870106 106			HWS	61.2	64.9	0.33	83.1	12.0	58.4	3L
870107 107			HWS	60.8	65.1	0.32	83.4	12.5	58.7	2M
870108 108			HWS	61.2	65.6	0.32	83.9	12.2	57.6	1M
870109 109			HWS	62.4	65.5	0.29	85.6	11.9	57.2	1L
870110 110			HWS	62.0	65.3	0.30	84.7	12.0	57.2	2M
870111 111			HWS	62.0	63.9	0.34	81.6	12.4	57.0	1M
870112 112			HWS	62.4	65.1	0.34	82.5	12.2	56.5	1M
870113 113			HWS	63.2	66.7	0.29	86.9	11.1	59.0	1M
870114 114			HWS	62.4	66.3	0.29	86.6	11.3	57.6	1M
870115 115			HWS	62.8	69.9	0.34	87.8	13.4	58.1	2M
870116 116			HWS	61.6	70.2	0.35	87.6	13.3	57.3	2M
870117 117			HWS	62.4	70.3	0.33	88.5	12.5	56.6	2M
870118 118			HWS	62.4	69.1	0.33	87.3	12.3	57.4	2M
870119 119			HWS	62.4	64.6	0.32	83.3	12.6	58.1	2M
870120 120			HWS	61.6	64.5	0.30	84.2	12.6	57.2	2M

NURSCO 1

DAVIS, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	* / RMKS
					<u>3 /</u>			<u>4 /</u>		
870106 106			HWS	59.6	59.6	2.5	770	770	8	
870107 107			HWS	60.9	60.4	1.5	840	809	8	
870108 108			HWS	59.5	59.3	1.5	835	823	8	
870109 109			HWS	58.8	58.9	1.2	775	781	9	
870110 110			HWS	59.4	59.4	1.3	790	790	9	
870111 111			HWS	58.6	58.2	1.0	740	715	9	
870112 112			HWS	58.4	58.2	1.2	740	728	9	
870113 113			HWS	59.8	60.7	1.4	750	806	9	
870114 114			HWS	58.6	59.3	1.3	725	768	9	
870115 115			HWS	60.7	59.3	1.3	750	663	8	
870116 116			HWS	59.8	58.5	1.3	775	694	8	
870117 117			HWS	58.8	58.3	1.4	790	759	8	
870118 118			HWS	59.4	59.1	1.5	780	761	8	
870119 119			HWS	59.9	59.3	1.3	780	743	8	
870120 120			HWS	59.5	58.9	1.4	755	718	9	

COMMENTS: This group of substitution lines were experimentally milled and baked to characterize their quality in cooperation with work at U.C. Davis. The material is characterized by very poor milling flour yields, short and weak dough mixing properties, and low loaf volumes with heavy, dense crumb structure. However, there is a wide range in all these properties, i.e. flour yield ranged from 57.9 - 73.5%, loaf volumes from 710 to 1125 and crumb grain from 1 (excellent) to 9+ (very poor), and dough mixing time from 1.1 - 8.6 min. Flour protein also exhibited a wide range (10.7 - 14.8%), explaining some of the differences in baking performance but not all.

* / Bread crumb was an additional point or two poorer than very unsatisfactory.

NURSCO 2

DAVIS, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870121 1		728/2-53	HRS	61.6	65.3	0.31	84.2	12.0	58.6	2M
870122 2		728/3-57	HRS	62.4	65.8	0.38	81.4	10.9	59.0	2M
870123 3		728/4-63	HRS	62.0	66.0	0.36	82.5	11.3	58.6	3L
870124 4		728/6-44	HRS	61.2	68.1	0.33	86.5	12.1	57.0	2M
870125 5		728/8-67	HRS	62.0	66.2	0.34	84.0	11.6	57.0	2M
870126 6		728/10-48	HRS	61.6	66.4	0.37	82.4	10.9	57.6	2M
870127 7		728/11-47	HRS	61.6	66.0	0.35	83.0	11.5	58.4	2M
870128 8		728/12-39	HRS	60.0	66.0	0.44	78.1	11.3	57.1	2M
870129 9		728/14-45	HRS	62.0	71.2	0.40	85.8	12.1	57.0	2M
870130 10		728/15-64	HRS	62.0	66.6	0.29	86.7	10.8	58.6	2M
870131 11		728/16-59	HRS	62.0	66.2	0.33	84.3	11.5	57.9	2M
870132 12		728/18-72	HRS	61.2	65.4	0.32	83.8	11.1	58.9	2M
870133 13		728/19-43	HRS	60.8	63.7	0.32	82.4	11.2	57.9	2M
870134 14		728/20-55	HRS	61.6	70.0	0.33	88.1	11.8	57.4	2M
870135 15		728/22-71	HRS	60.8	66.1	0.31	85.1	11.1	58.2	2M
870136 16		728/23-68	HRS	60.8	66.5	0.53	74.2	10.8	59.6	2M
870137 17		728/24-65	HRS	62.4	64.0	0.36	80.1	11.4	58.1	2M
870138 18		728/26-61	HRS	62.4	66.4	0.36	83.1	11.2	57.6	2L
870139 19		728/27-60	HRS	60.8	69.9	0.34	87.6	11.7	57.5	2M
870140 20		728/28-49	HRS	60.8	63.6	0.35	80.6	11.6	58.7	2M
870141 21		6/728/1	HRS	63.2	71.5	0.38	87.5	12.0	63.5	7H
870142 22		6/728/9	HRS	63.6	71.6	0.36	88.3	11.3	62.0	7H
870143 23		6/728/38	HRS	62.8	71.2	0.37	87.6	11.6	61.6	7H
870144 24		6/728/46	HRS	63.6	71.8	0.37	88.1	11.8	62.8	7H
870145 25		728/5	HRS	64.4	72.9	0.34	90.7	9.0	59.6	2M
870146 26		728/13	HRS	64.8	73.0	0.33	91.4	9.2	60.3	2M
870147 27		728/42	HRS	64.8	73.1	0.32	91.9	9.7	59.9	2M
870148 28		728/50	HRS	64.4	72.4	0.33	91.0	9.6	60.1	2M
870149 29		6/728/34	HRW	64.4	72.1	0.36	88.6	12.0	61.5	4H
870150 30		6/728/51	HRW	63.6	72.0	0.36	88.6	12.1	61.9	4H
870151 31		6/728/36	HRW	63.2	71.7	0.36	88.3	12.1	62.1	4H
870152 32		6/728/35-40	HRW	62.8	71.5	0.48	82.2	12.0	62.1	4H
870153 33		728/30/52	HWS	61.8	65.1	0.34	82.6	11.5	59.1	1M
870154 34		728/31	HWS	62.0	71.5	0.46	83.2	11.7	54.1	1M
870155 35		728/6	HWS	62.0	64.7	0.32	83.3	11.4	58.4	2M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 2

DAVIS, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVGLC	BCRGR	RMKS
					3/			4/ */ 4/		
870121 1		728/2-53	HRS	61.3	60.3	1.5	825	763	Q-U	7 P-FYELD, MT, LV&BCRGR
870122 2		728/3-57	HRS	60.6	60.7	1.7	865	871	Q	6 P-FYELD, MT, LV&BCRGR
870123 3		728/4-63	HRS	60.6	60.3	2.5	760	741	Q-U	8 P-FYELD, MT, LV&BCRGR
870124 4		728/6-44	HRS	59.8	58.7	1.5	760	692	Q-U	8 P-MTIME, LVOL&BCRGR
870125 5		728/8-67	HRS	59.3	58.7	1.5	795	758	Q-U	8 P-FYELD, MT, LV&BCRGR
870126 6		728/10-48	HRS	59.2	59.3	1.4	790	796	U	9 P-FYELD, MT, LV&BCRGR
870127 7		728/11-47	HRS	60.6	60.1	1.7	835	804	Q-U	8 P-FYELD, MT, LV&BCRGR
870128 8		728/12-39	HRS	59.1	58.8	1.5	750	731	U	9 P-FYELD, MT, LV&BCRGR
870129 9		728/14-45	HRS	59.8	58.7	1.4	765	697	U	9 P-MTIME, LVOL&BCRGR
870130 10		728/15-64	HRS	60.1	60.3	1.5	735	747	U	9 P-FYELD, MT, LV&BCRGR
870131 11		728/16-59	HRS	60.1	59.6	1.4	825	794	U	9 P-FYELD, MT, LV&BCRGR
870132 12		728/18-72	HRS	60.7	60.6	1.4	755	749	U	9 P-FYELD, MT, LV&BCRGR
870133 13		728/19-43	HRS	58.8	58.6	1.5	780	768	U ²	9 P-FYELD, MT, LV&BCRGR
870134 14		728/20-55	HRS	58.9	58.1	1.4	740	690	U ²	9 P-MTIME, VL&BCRGR
870135 15		728/22-71	HRS	59.0	58.9	1.5	775	769	U	9 P-FYELD, MT, LV&BCRGR
870136 16		728/23-68	HRS	60.1	60.3	1.4	805	817	U ²	9 P-FYELD, MT, LV&BCRGR
870137 17		728/24-65	HRS	59.2	58.8	1.3	740	715	U ²	9 P-FYELD, MT, LV&BCRGR
870138 18		728/26-61	HRS	58.5	58.3	1.9	790	778	Q-U	8 P-FYELD, MT, LV&BCRGR
870139 19		728/27-60	HRS	58.9	58.2	1.5	820	777	Q-U	8 P-MTIME, LVOL&BCRGR
870140 20		728/28-49	HRS	60.0	59.4	1.5	795	758	Q-U	8 P-FYELD, MT, LV&BCRGR
870141 21		728/1	HRS	66.2	65.2	6.4	950	888	S	2
870142 22		728/9	HRS	64.0	63.7	5.8	940	921	S	2
870143 23		728/38	HRS	63.9	63.3	5.9	1030	993	S	2
870144 24		728/46	HRS	65.3	64.5	6.7	1040	990	S	2
870145 25		728/5	HRS	58.3	60.3	1.9	800	924	U	9 P-MTIME&BCRGR
870146 26		728/13	HRS	59.2	61.0	1.9	820	932	U	9 P-MTIME&BCRGR
870147 27		728/42	HRS	59.3	60.6	1.9	855	936	Q-U	7 P-MTIME&BCRGR
870148 28		728/50	HRS	59.4	60.8	1.9	855	942	Q-U	8 P-MTIME&BCRGR
870149 29		728/34	HRW	64.2	63.2	4.5	965	903	S	2
870150 30		728/51	HRW	64.7	63.6	4.1	995	927	S	2
870151 31		728/36	HRW	64.9	63.8	3.9	980	912	Q-S	4 Q-BCRGR
870152 32		728/35-40	HRW	64.8	63.8	3.9	995	933	S	2
870153 33		728/30/52	HWS	60.3	59.8	1.3	780	749	U ²	9 P-FYELD, MT, LV&BCRGR
870154 34		728/31	HWS	55.5	54.8	1.4	620	577	U ²	9 VP-LVOL&BCRGR
870155 35		728/6	HWS	59.5	59.1	1.4	735	710	U ³	9 P-FYELD, MT, LV&BCRGR

* / Scoring system ends at 9, which is an unsatisfactory score. Those significantly poorer than 9 are indicated by a superscript of 2 or 3 accordingly.

DAVIS, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870156 36		728/32/	HWS	61.6	64.4	0.34	81.8	11.4	59.0	2M
LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
870156 36		728/32/	HWS	60.1	59.7	1.8	750	725	9 P-FYELD, MT, LV&BCRGR	

COMMENTS: These substitution lines were baked in cooperation with a U.C. Davis study. Most lines are characterized by poor flour milling, short dough mixing properties and low loaf volumes with heavy crumb structures. There was however a wide range in most of these properties.

NURSCO 3

CHEHALIS, WA

H. HAMILTON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
870157 BATUM			HRW	60.9	72.4	0.39	87.5	9.5	60.3	3M
870158 HM-1			HRW	62.9	71.4	0.35	88.4	11.3	64.7	5H
LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
870157 BATUM			HRW	61.5	62.0	2.0	855	886	6	
870158 HM-1			HRW	67.7	66.4	4.2	935	854	2	

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein.4/ Observed Values Corrected to 10% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS: These two wheats are about equal in overall milling properties. The HM-1 is superior to Batum in all physical dough (absorption, mixing time, and mixing tolerance) and bread baking properties.

The HM-1 was about 2% higher in protein than Batum.

NURSCO 4

RITZVILLE, WA

C.J. PETERSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
					1/	1/	1/	1/	3/			4/	
870159	DAWS	C1017419	SWW	62.0	72.9	0.40	88.2	8.0	53.0	2L	8.74	8.74	
870160	LEWJAIN	C1017909	SWW	63.0	73.8	0.39	90.4	9.0	54.9	2M	9.21	9.32	
870161	HILL 81	C1017954	SWW	62.0	75.5	0.41	91.2	8.3	52.5	2L	8.96	9.00	
870162	MALCOLM	ORCW8113	SWW	61.0	74.0	0.39	90.4	7.5	52.4	1L	9.36	9.31	
870163	JOHN	P1494095	SWW	61.0	72.3	0.38	88.9	7.6	51.5	2L	9.22	9.18	
870164	CREW	C1017951	CLUB	61.0	74.2	0.39	90.6	7.2	49.2	1L	9.11	9.06	
870165	SPN/PI173438(M76-479)	5/OR000836	SWW	59.0	75.3	0.43	89.7	8.8	51.6	2L	9.29	9.38	
870166	SWON6/PDGA//SWON3(PEKING)/3/VH76279	VH086323	SWW	61.0	68.6	0.43	81.3	10.6	53.3	2M	9.25	9.54	Low FYELD
870167	VJ79132/DAWS	VJ086410	SWW	61.0	72.7	0.42	87.0	7.3	50.5	1L	8.74	8.66	Low CODI
870168	VH80833/VH79121	VH086427	SWW	60.0	71.9	0.45	84.3	7.7	52.6	2L	8.92	8.89	Q-MSCOR&CODI
870169	SPRAGUE	C1015376	SWW	60.0	74.9	0.45	87.8	8.7	52.0	2L	9.07	9.12	
870170	LUKE/BR704434	6/WA007431	SWW	62.0	73.3	0.41	88.6	8.0	54.3	3L	9.37	9.37	
870171	MARI'S HUNTSMAN/VH74521	WA076910	SWW	61.0	73.0	0.45	85.6	8.2	50.9	1M	8.70	8.72	Low CODI
870172	MARI'S HUNTSMAN/VH75521	WA136910	SWW	62.0	73.4	0.45	85.6	7.7	52.5	1M	8.11	8.08	VP-CODI
870173	BVR/C115923//NGS	5/WA691213	SWW	62.0	74.6	0.41	90.0	7.9	50.1	3L	9.29	9.28	
870174	MARI'S HUNTSMAN/VH74521	6/WA096910	SWW	61.0	73.0	0.41	87.9	7.9	52.3	2L	9.27	9.26	
870175	LJN/VH75263, NCO/LUKE	6/VH084101	SWW	62.0	72.3	0.41	86.8	7.6	52.3	2L	9.27	9.23	
870176	WA6470//SRG/LUKE	5/VH084119	SWW	62.0	73.9	0.38	90.7	8.2	53.7	3L	8.94	8.96	Q-CODI
870177	DAWS/3/YMH/VH68310//CER	6/VH084185	SWW	62.0	73.5	0.39	90.0	7.6	52.3	3L	8.87	8.83	Low CODI
870178	WA6581//BARBEE/AM70207	6/VD084042	SWW	62.0	75.4	0.41	90.8	7.9	49.9	1L	9.10	9.09	
870179	VH77353/JACMAR	6/VC084070	SWW	58.0	72.7	0.42	87.0	8.5	50.3	1L	9.30	9.35	
870180	V78037, OR680073/CERCO	VH084463	SWW	62.0	74.9	0.44	88.3	8.7	53.4	2M	8.46	8.54	P-CODI
870181	BBY/HYS//LUKE/3/LJN	6/VH084303	SWW	62.0	72.9	0.40	88.2	9.0	52.3	2M	8.85	8.96	Q-CODI
870182	ID745318/3/VH76429	6/VH084257	SWW	62.0	72.6	0.43	86.2	8.3	53.4	2L	8.79	8.82	Q-CODI
870183	VH77353/3/JACMAR	5/VH084302	SWW	60.0	73.3	0.40	89.2	6.9	51.7	2L	9.54	9.42	
870184	DAWS//VH78297/CER	VH084225	SWW	61.0	72.4	0.43	86.1	9.0	53.7	2M	8.02	8.13	P-CODI
870185	DAWS/LUKE//VH68425	VH084239	SWW	62.0	71.4	0.42	85.3	9.7	51.7	2M	8.97	9.16	Q-FYELD
870186	VH78121/LEWJAIN	VH084437	SWW	61.0	71.2	0.41	85.3	8.5	53.6	3L	9.04	9.09	Q-FYELD
870187	WA6240/WA6145//LUKE	6/VJ082211	SWW	60.0	74.0	0.39	90.3	7.8	52.4	2L	9.07	9.05	
870188	DAWS/VH77884	VH084210	SWW	61.0	72.0	0.40	87.2	7.9	53.4	2L	8.67	8.66	P-CODI
870189	LUKE/VH67375//LUKE	5/VH082252	SWW	59.0	74.1	0.37	91.7	7.6	52.3	2L	9.16	9.12	
870190	LUKE/VH67375//CERCO	6/VH082253	SWW	59.0	72.9	0.39	88.8	7.7	52.7	3L	9.04	9.00	
870191	LEWJAIN/AM100-13	5/VH083021	SWW	61.0	73.8	0.37	91.3	9.7	51.7	2M	9.06	9.25	
870192	BBY/HYS//LUKE/3/LJN	5/VH085051	SWW	61.0	74.5	0.41	90.0	8.1	52.5	2L	9.32	9.34	
870193	DAWS//LUKE/BR70-443-4	6/VJ085141	SWW	62.0	72.2	0.43	85.6	8.2	51.5	2L	9.04	9.06	Q-FYELD

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

4/ Observed Values Corrected to 8% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 4

RITZVILLE, WA

C.J. PETERSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
					1/	1/	1/	1/	3/			4/	
870194	SENTRY/LEWJAIN	VH085206	SWW	63.0	73.9	0.44	87.0	8.3	53.4	2M	8.41	8.45	P-CODI
870195	MARKSMAN/DAWS	6/VH085208	SWW	59.0	74.2	0.41	89.4	7.9	52.0	2L	9.11	9.10	
870196	VH79284/LEWJAIN	6/VH085563	SWW	60.0	73.1	0.43	86.6	8.5	53.4	3L	9.07	9.13	
870197	VH80269/3/VPM-1/MOISSON	VH085392	SWW	60.0	73.6	0.44	86.6	8.5	52.8	2L	8.77	8.83	Q-CODI
870198	VH08533/V72074/CER	VH085014	SWW	60.0	72.9	0.39	88.8	7.9	52.1	2L	8.77	8.76	P-CODI
870199	NGS//VH79257, V72074/CER	6/VH085454	SWW	60.0	73.6	0.40	89.2	8.5	51.0	1L	9.02	9.08	
870200	41-26/OR67205	5/VH085549	SWW	61.0	74.0	0.41	89.3	8.7	52.5	2M	9.24	9.31	
870201	NGS/VH72588//WA6581	6/VH085008	SWW	62.0	73.2	0.41	87.9	8.4	52.2	2L	9.11	9.16	
870202	VD68245/PAHA//SPN/PAHA	5/VH085167	SWW	63.0	74.2	0.39	91.0	9.6	51.1	1M	9.22	9.40	
870203	VH68266/LUKE//WA6264	6/VH083352	SWW	61.0	72.1	0.40	87.4	7.5	54.0	3L	9.12	9.07	
870204	WA6581//V72005/PAHA	VD085006	SWW	62.0	74.6	0.40	90.4	8.2	49.4	1L	8.83	8.85	Q-CODI
870205	SPRAGUE/WA6146//WA6697	5/VH085337	SWW	61.0	74.8	0.38	92.1	7.7	51.0	3L	9.24	9.20	
870206	DAWS/LUKE//HILL 81	6/VH085401	SWW	59.0	74.6	0.40	90.4	7.2	50.1	1L	9.16	9.07	
870207	NORCO/ID72001//SPRAGUE	VH085423	SWW	61.0	75.2	0.40	91.3	9.3	52.1	2M	8.64	8.78	Q-CODI
870208	PECK//A/WA4765//ID745318	VJ085488	SWW	61.0	71.6	0.42	85.3	8.5	52.7	2M	9.02	9.08	Q-FYELD
870209	ID745318/GREER	VH085496	SWW	60.0	71.7	0.41	86.2	8.2	54.0	3L	9.01	9.03	Q-FYELD
870210	MORO/ID745318//(?)	VJ085519	SWW	60.0	71.3	0.45	83.4	8.4	52.2	2L	8.74	8.78	Q-CODI
870211	WA6241/ID745318	VH085539	SWW	61.0	71.7	0.40	87.0	8.0	56.2	3L	8.65	8.65	P-CODI
870212	VH77353/VH79023	6/VD086002	SWW	61.0	73.6	0.40	89.3	7.6	52.3	2L	9.25	9.21	
870213	WA6814/WA6698	6/VA086133	SWW	61.0	76.7	0.42	91.9	9.7	52.1	1M	8.75	8.94	Q-CODI
870214	WA6814/WA6581	6/VH086141	SWW	62.0	73.5	0.40	89.0	8.3	51.9	1L	9.15	9.18	
870215	ID3528/WA6814	6/VD086150	SWW	62.0	74.6	0.40	90.4	8.4	53.2	2L	8.90	8.94	Q-CODI
870216	ID72001/PI173438/LJN	VD086167	SWW	62.0	72.9	0.40	88.6	7.6	51.0	1L	8.84	8.79	P-CODI
870217	VH79121, SPN/CER//HILL 81	6/VH086051	SWW	59.0	72.6	0.44	85.6	8.2	50.6	1L	9.15	9.17	
870218	PECK//A/WA4765/3/GREER12	6/VJ086103	SWW	60.0	72.3	0.40	87.6	7.2	53.0	3L	9.05	8.96	Q-CODI
870219	V80037, ROAZON/DAWS//CER	VH086182	SWW	60.0	70.3	0.39	85.9	8.3	52.4	2L	8.90	8.93	P-FYELD
870220	VPM-1/M//VH79121/3/DAWS	6/VH086199	SWW	60.0	75.1	0.38	92.5	7.9	50.7	1L	8.95	8.94	Q-CODI
870221	VPM-1-M//VH79121/3/VH79309	VH086204	SWW	61.0	69.8	0.43	82.6	8.6	55.0	3L	8.94	9.00	P-FYELD Q-CODI
870222	VD80262//VPM-1/M/3/DAWS	VH086217	SWW	60.0	71.6	0.46	83.2	6.4	53.8	2L	8.36	8.19	Q-FYELD P-CODI
870223	BOUNTY (CAMB)/4/VH79245	VH086313	SWW	61.0	75.2	0.43	89.6	9.6	55.1	3L	8.49	8.66	P-CODI
870224	ROAZON//LUKE/WA6361	6/VH086353	SWW	61.0	72.1	0.38	88.5	8.5	53.1	3L	8.89	8.94	Q-CODI
870225	YMH/63-112-66-2//CER	6/IWS11052	SWW	62.0	73.2	0.43	87.1	9.0	53.6	1M	8.77	8.88	Q-CODI
870226	MITHRAS/DAWS	6/VH086019	SWW	60.0	74.5	0.32	95.9	7.2	51.6	2L	8.99	8.91	Q-CODI
870227	VJ77296//CB73-216/WA6146	5/VH086048	SWW	60.0	75.0	0.43	89.4	8.4	54.0	2L	9.22	9.27	
870228	OLYMPIA/LUKE//VH79258	VH086065	SWW	61.0	72.0	0.43	85.3	8.8	52.3	2L	8.79	8.88	Q-CODI

NURSCO 4

RITZVILLE, WA

C.J. PETERSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
					1/	1/		1/	3/			4/	
870229	DAWS/BISON"S"	VH086077	SWW	61.0	72.9	0.41	87.7	9.4	54.8	2M	8.64	8.79P-CODI	
870230	YMH/ID745318	6/VH086115	SWW	61.0	72.0	0.39	87.7	8.0	52.2	1L	9.39	9.39	
870231	VH166438/DAWS//HILL 81	6/VH086206	SWW	61.0	74.4	0.37	92.1	8.1	53.9	2L	9.05	9.06	
870232	VH166438/DAWS//VH76297	6/VH086213	SWW	62.0	73.8	0.39	90.1	8.2	52.1	2L	8.89	8.91Q-CODI	
870233	NGS/101//PI172582/3/BCD	6/VH086242	SWW	61.0	74.0	0.41	89.5	8.3	53.0	2L	8.96	9.00Q-CODI	
870234	VH79121, SPN/CER/VH80468	VH086248	SWW	61.0	72.7	0.43	86.5	9.1	53.8	1M	8.54	8.66P-CODI	
870235	VH76472, YMH/VH68310//CER	6/VH086284	SWW	60.0	73.5	0.38	90.5	8.7	55.2	4L	9.04	9.11	
870236	BGD(CAMB)/HILL 81	6/VH086292	SWW	59.0	72.8	0.40	88.4	9.7	53.1	1M	8.99	9.17	
870237	BGD(CAMB)/VH78133	6/VH086296	SWW	60.0	71.8	0.39	87.9	8.4	52.4	1L	9.12	9.17	
870238	BDG(CAMB)/4/VH79245	VH086298	SWW	59.0	70.6	0.40	85.4	8.2	53.1	1L	9.07	9.10P-FYELD	
870239	WA6581/4/VD80057/VH74340	5/VJ086377	SWW	61.0	73.7	0.40	89.2	8.5	54.4	2L	9.29	9.34	
870240	VH76472, YMH/VH68310//CER	6/VH086402	SWW	62.0	71.2	0.37	88.4	8.5	52.2	2L	9.17	9.23	
870241	AM79057/VH79121, SPN/CER	5/VH086406	SWW	60.0	73.5	0.37	91.0	7.4	52.0	2L	9.55	9.48	
870242	VH80487, MHM, DAWS//VH805	5/VH086424	SWW	60.0	74.6	0.37	92.7	7.9	51.9	2L	9.32	9.31	
870243	VH80833/VH80178	6/VH086428	SWW	60.0	72.7	0.40	88.0	8.2	51.5	2L	9.24	9.26	
870244	ID72001/PI173438	5/VJ086468	SWW	61.0	74.7	0.41	90.1	8.5	50.7	2L	9.21	9.27	
870245		VM086514	SWW	61.0	72.0	0.45	84.2	7.6	57.0	3L	8.31	8.27P-CODI	
870246		VM086524	SWW	64.0	72.4	0.44	85.0	8.4	57.2	2M	8.44	8.48P-CODI	

COMMENTS: The nursery had excellent protein level for soft wheat products. There are many selections which have promising overall quality (footnoted) equal to or better than the check varieties. Flour yields and cookie diameters were above average for the group, so the new selections were judged accordingly.

P = Poor; Q = Questionable; VP = Very Poor

NURSCO 5

CORCORAN, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870247 ANZA		E1 S1	HRS	63.2	70.6	0.38	86.4	10.1	59.5	3M
870248 YECORA ROJO		6/ E2 S1	HRS	64.2	71.4	0.38	87.2	12.1	63.6	7H
870249 YOLO		E3 S1	HRS	62.9	72.1	0.38	88.0	10.2	58.6	3M
870250 TADINIA		E4 S1	HRS	60.3	61.8	0.43	74.4	10.8	60.7	4L
870251 SHASTA		E5 S1	HRS	64.4	70.5	0.43	83.7	11.2	61.1	4M
870252 VEERY "S"		E6 S1	HRS	61.6	67.7	0.44	80.0	12.4	62.3	5H
870253 KLASIC		6/ E7 S1	HRS	66.1	73.0	0.34	90.7	10.9	63.0	6H
870254 WESTBRED 911		E8 S1	HRS	61.2	68.8	0.41	82.9	10.2	63.5	8M
870255 JUANILLO		E9 S1	TRIT	53.7	62.7	0.42	76.1	8.6	56.6	5L
870256 TZPP X ANZA*2		6/ E11 S1	HRS	63.9	71.4	0.37	87.4	9.8	62.1	4M
870257 LRR ANZA		E12 S1	HRS	63.9	71.7	0.36	88.3	10.1	61.8	3M
870258 BB "S" X ANZA		E13 S1	HRS	63.4	72.1	0.38	87.6	9.8	61.9	3M
870259 AZTECA X ANZA		6/ E14 S1	HRS	63.7	72.1	0.41	86.1	10.8	61.2	4M
870260 YECORA "S" X MEXIFEN		6/ E15 S1	HRS	62.1	70.7	0.41	84.8	10.7	62.8	8M
870261 SIETE CERROS		E19 S1	HRS	62.6	67.2	0.40	81.8	9.6	63.9	6M
870262 ANZA		E1 S3	HRS	62.4	69.5	0.38	85.0	9.9	59.0	2M
870263 YECORA ROJO		6/ E2 S3	HRS	61.8	68.8	0.40	83.2	12.0	62.2	5H
870264 YOLO		E3 S3	HRS	60.4	68.9	0.46	80.4	10.8	59.7	1H
870265 TADINIA		E4 S3	HRS	59.2	67.3	0.42	80.7	11.1	58.1	2M
870266 SHASTA		E5 S3	HRS	59.2	65.1	0.47	75.9	11.6	61.9	4M
870267 VEERY "S"		E6 S3	HRS	53.6	60.9	0.52	69.0	12.6	60.7	3M
870268 KLASIC		E7 S3	HRS	60.8	68.0	0.44	80.6	12.2	59.8	4H
870269 WESTBRED 911		E8 S3	HRS	55.2	60.1	0.56	65.8	11.1	60.8	4H
870270 JUANILLO		E9 S3	TRIT	42.0	52.7	0.60	56.1	10.7	54.3	2L
870271 TZPP X ANZA*2		E11 S3	HRS	60.5	67.7	0.44	80.2	9.9	61.5	2H
870272 LRR ANZA		E12 S3	HRS	60.2	68.6	0.41	82.6	10.9	58.6	2M
870273 BB "S" X ANZA		E13 S3	HRS	62.0	69.2	0.40	83.5	11.4	60.0	1H
870274 AZTECA X ANZA		6/ E14 S3	HRS	59.6	68.3	0.41	82.4	12.8	60.6	2H
870275 YECORA "S" X MEXIFEN		E15 S3	HRS	58.4	66.3	0.41	78.7	10.3	62.9	3M
870276 SIETE CERROS		E19 S3	HRS	58.6	66.1	0.44	78.2	11.8	61.0	5H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 5

CORCORAN, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
870247 ANZA		E1 S1	HRS	60.3	61.2	2.0	825	880		8 P-MTIME&BCRGR
870248 YECORA ROJO		E2 S1	HRS	66.4	65.3	5.9	945	877		3 P-MTIME&BCRGR
870249 YOLO		E3 S1	HRS	59.5	60.3	1.9	905	955		8 P-MTIME&BCRGR
870250 TADINIA		E4 S1	HRS	62.2	62.4	2.8	800	812		8 P-LVOL&BCRGR
870251 SHASTA		E5 S1	HRS	63.0	62.8	2.4	895	883		3 VP-FYELD
870252 VEERY "S"		E6 S1	HRS	65.4	64.0	3.7	925	838		4 Q-BCRGR P-FYELD
870253 KLASIC		E7 S1	HRS	64.6	64.7	5.9	935	941		5 Q-BCRGR
870254 WESTBRED 911		E8 S1	HRS	64.4	65.2	5.5	775	825		8 P-FYELD&BCRGR
870255 JUANILLO		E9 S1	TRIT	55.9	58.3	3.0	510	659		9 VP-FYELD,LVOL&BCRGR
870256 TZPP X ANZA*2		E11 S1	HRS	62.6	63.8	2.6	880	954		4 Q-BCRGR
870257 LRR ANZA		E12 S1	HRS	62.6	63.5	2.1	805	861		8 P-MTIME&BCRGR
870258 BB "S" X ANZA		E13 S1	HRS	62.4	63.6	2.0	875	949		9 P-MTIME&BCRGR
870259 AZTECA X ANZA		E14 S1	HRS	62.7	62.9	2.6	925	937		4 Q-BCRGR
870260 YECORA "S" X MEXIFEN		E15 S1	HRS	64.2	64.5	6.2	925	944		2
870261 SIETE CERROS		E19 S1	HRS	64.2	65.6	3.3	760	847		8 P-FYELD&BCRGR
870262 ANZA		E1 S3	HRS	59.6	60.7	1.4	735	802		9 P-MTIME,LVOL&BCRGR
870263 YECORA ROJO		E2 S3	HRS	64.9	63.9	4.0	1000	938		1 Q-FYELD
870264 YOLO		E3 S3	HRS	61.2	61.4	1.7	930	942		6 P-FYELD,MTIME&BCRGR
870265 TADINIA		E4 S3	HRS	59.9	59.8	1.9	805	799		7 P-FYELD,MTIME&BCRGR
870266 SHASTA		E5 S3	HRS	64.2	63.6	3.2	905	868		6 P-FYELD&BCRGR
870267 VEERY "S"		E6 S3	HRS	64.0	62.4	1.9	895	796		8 VP-MTIME,LVOL&BCRGR
870268 KLASIC		E7 S3	HRS	62.7	61.5	4.0	1060	986		3 Q-FYELD
870269 WESTBRED 911		E8 S3	HRS	62.6	62.5	3.7	840	834		8 VP-FYELD&BCRGR
870270 JUANILLO		E9 S3	TRIT	55.7	56.0	2.2	450	469		9 VP-FYELD,LVOL&BCRGR
870271 TZPP X ANZA*2		E11 S3	HRS	62.1	63.2	1.8	960	1028		4 P-FYELD&MTIME Q-BCRGR
870272 LRR ANZA		E12 S3	HRS	60.2	60.3	1.5	835	841		8 P-FYELD,MTIME&BCRGR
870273 BB "S" X ANZA		E13 S3	HRS	62.1	61.7	1.5	1010	985		4 Q-FYELD P-MTIME
870274 AZTECA X ANZA		E14 S3	HRS	64.1	62.3	2.5	995	883		2 Q-FYELD
870275 YECORA "S" X MEXIFEN		E15 S3	HRS	63.9	64.6	2.0	890	933		8 VP-FYELD,MTIME&BCRGR
870276 SIETE CERROS		E19 S3	HRS	63.5	62.7	5.1	1035	985		1 P-FYELD

COMMENTS: The S1 treatment was irrigation water with 450 ppm. salinity level; S3 was irrigated with water containing 9000 ppm. salinity. The higher salt levels consistently lowered the flour yield and increased flour ash level. In a general way, the baking properties were also poorer in the high salt level treatment. Typical cultivar quality characteristics were relatively unchanged. See "Remarks" for major deficiencies.

P = Poor; Q = Questionable; VP = Very Poor

NURSCO 6

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870277		7105/1	HWS	65.1	71.4	0.36	88.1	8.6	65.3	4M
870278		7105/2	HRS	65.0	69.6	0.33	87.8	9.5	63.7	2M
870279		6/7105/3	HRS	64.2	69.2	0.35	86.3	12.6	63.9	4H
870280		6/7105/4	HRW	62.8	69.4	0.36	86.2	11.3	62.4	3H
870281		7105/5	HRW	62.7	67.9	0.35	85.2	11.0	63.9	4M
870282		5/7105/6	HRW	62.9	70.5	0.35	87.7	12.0	62.9	4H
870283		7105/7	HRW	65.2	68.9	0.36	85.6	12.9	63.8	2H
870284		6/7105/8	HRW	63.6	70.3	0.35	87.5	9.9	62.0	4M
870285		7105/9	HRW	65.0	70.7	0.34	88.4	10.7	62.6	3M
870286		6/7105/10	HRW	62.9	70.0	0.34	87.7	10.7	63.2	4M
870287		7105/11	HRW	64.1	68.1	0.34	85.6	9.8	64.1	7M
870288		7105/12	HRW	64.2	67.6	0.30	87.1	10.0	61.5	7M
870289		7105/13	HRW	65.2	68.7	0.34	86.2	9.0	64.2	6L
870290		7105/14	HRW	63.4	68.3	0.33	86.3	9.8	61.4	7M
870291		7105/15	HRW	64.2	70.5	0.36	87.3	10.2	63.7	7M
870292		6/7105/16	HRW	62.6	70.5	0.35	87.7	8.5	60.4	6L
870293		6/7105/17	HRW	64.9	70.6	0.33	88.7	9.3	63.5	7M
870294		6/7105/18	HRW	64.1	70.3	0.37	86.4	10.0	62.2	8M
870295		7105/19	HRS	65.2	70.6	0.36	87.3	11.5	64.6	5H
870296		7105/20	HRS	64.3	67.6	0.34	85.2	11.8	63.4	3H
870297		7105/21	HWS	65.6	70.4	0.34	88.0	11.5	64.2	5H
870298		7105/43	HRW	65.2	69.5	0.34	87.3	9.1	61.1	2M
870299		7105/44	HRW	64.9	67.8	0.33	85.8	8.7	62.6	6L
870300		7105/45	HWS	65.2	69.7	0.33	87.8	12.0	61.7	3H
870301		7105/46	HRW	64.2	68.2	0.34	85.7	9.4	63.4	6L
870302		7105/47	HRW	63.6	70.2	0.36	87.0	10.4	61.3	4M
870303		7105/48	HWS	64.8	70.8	0.36	87.7	9.8	61.9	4M
870304		7105/49	HRW	64.1	70.4	0.35	87.6	11.8	62.5	4H
870305		7105/50	HRW	65.8	68.7	0.37	85.0	11.4	62.3	2H
870306		7105/51	HRS	65.1	70.6	0.38	86.3	11.8	63.3	5H
870307		7105/52	HRW	63.6	70.4	0.34	88.0	10.0	62.7	6M
870308		7105/53	HRW	63.1	68.0	0.35	84.9	9.8	61.8	6M
870309		6/7105/54	HRW	64.3	70.3	0.37	86.6	9.4	60.8	8M
870310		7105/55	HRS	64.3	68.7	0.36	85.5	11.8	64.0	4H
870311		7105/56	HRW	63.1	69.4	0.39	84.2	11.8	61.5	2H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 6

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
870277		7105/1	HWS	64.6	67.0	3.1	880	1029	5	Q-BCRGR
870278		7105/2	HRS	63.4	64.9	1.7	785	878	6	P-MTIME, LVOL&BCRGR
870279		7105/3	HRS	67.2	65.6	3.1	1015	916	2	Q-MTIME
870280		7105/4	HRW	63.4	63.1	2.0	1000	981	2	P-FYELD
870281		7105/5	HRW	64.6	64.6	3.4	960	960	2	
870282		7105/6	HRW	65.6	64.6	3.6	1015	953	2	
870283		7105/7	HRW	66.4	64.5	3.2	930	812	3	Q-FYELD, LVOL&BCRGR
870284		7105/8	HRW	61.6	62.7	2.9	925	993	4	Q-BCRGR
870285		7105/9	HRW	63.0	63.3	2.1	910	929	3	Q-MTIME&BCRGR
870286		7105/10	HRW	63.6	63.9	2.5	970	989	2	
870287		7105/11	HRW	64.6	65.8	5.1	845	919	4	Q-FYELD&BCRGR
870288		7105/12	HRW	61.2	62.2	3.3	845	907	4	P-FYELD Q-BCRGR&LVOL
870289		7105/13	HRW	63.9	65.9	4.0	820	944	4	Q-FYELD&BCRGR
870290		7105/14	HRW	61.9	63.1	3.5	920	994	4	Q-FYELD&BCRGR
870291		7105/15	HRW	64.6	65.4	4.6	855	905	4	Q-LVOL&BCRGR
870292		7105/16	HRW	59.6	62.1	4.5	815	970	4	Q-BCRGR
870293		7105/17	HRW	63.5	65.2	4.1	890	995	4	Q-BCRGR
870294		7105/18	HRW	62.9	63.9	6.5	870	932	3	Q-BCRGR
870295		7105/19	HRS	66.8	66.3	4.5	875	844	3	P-LVOL&BCRGR
870296		7105/20	HRS	65.9	65.1	3.1	880	830	4	P-FYELD, LVOL&BCRGR
870297		7105/21	HWS	66.4	65.9	4.0	890	859	2	P-LVOL
870298		7105/43	HRW	60.9	62.8	1.5	720	838	8	P-MTIME, LVOL&BCRGR
870299		7105/44	HRW	62.0	64.3	3.4	810	953	4	Q-FYELD&BCRGR
870300		7105/45	HWS	64.4	63.4	3.1	920	858	4	Q-LVOL&BCRGR
870301		7105/46	HRW	63.5	65.1	4.7	755	854	5	Q-FYELD, LVOL&BCRGR
870302		7105/47	HRW	62.4	63.0	2.8	825	862	6	Q-LVOL&BCRGR
870303		7105/48	HWS	62.4	63.6	2.8	805	879	5	Q-LVOL&BCRGR
870304		7105/49	HRW	65.0	64.2	3.9	875	825	2	P-LVOL&BCRGR
870305		7105/50	HRW	64.4	64.0	2.3	810	785	5	Q-FYELD, MTIME P-LVOL
870306		7105/51	HRS	65.8	65.0	4.6	855	805	4	P-LVOL Q-BCRGR
870307		7105/52	HRW	63.4	64.4	3.6	815	877	7	P-LVOL&BCRGR
870308		7105/53	HRW	62.3	63.5	2.9	835	909	4	Q-FYELD&BCRGR
870309		7105/54	HRW	60.9	62.5	6.5	870	969	4	Q-BCRGR
870310		7105/55	HRS	66.5	65.7	3.2	925	875	4	Q-FYELD, LVOL&BCRGR
870311		7105/56	HRW	64.0	63.2	2.2	935	885	4	Q-MTIME, LVOL&BCRGR

NURSCO 6

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870312		7105/57	HRW	64.8	67.2	0.34	84.8	10.4	63.1	7M
870313		7105/58	HRW	64.7	70.7	0.37	87.0	12.3	60.4	2H
870314		7105/59	HRW	61.8	70.7	0.40	85.5	9.1	63.4	8M
870315		7105/60	HRW	63.3	70.5	0.37	86.5	10.7	62.2	6M
870316		7105/61	HRW	63.9	70.2	0.33	88.2	12.8	62.9	4H
870317		7105/62	HRW	64.5	69.2	0.36	85.9	9.9	64.0	7M
870318		7105/63	HRS	63.3	67.7	0.36	84.1	14.2	63.9	4H
870319		6/ 7105/85	HRS	64.1	69.7	0.34	87.7	12.9	62.4	3H
870320		6/ 7105/86	HRW	63.2	70.0	0.32	88.9	12.1	64.1	4H
870321		6/ 7105/87	HRW	63.9	68.5	0.34	86.2	13.8	62.9	3H
870322		6/ 7105/88	HRW	63.1	69.8	0.37	86.0	10.7	64.0	8M
870323		7105/89	HRW	62.2	69.8	0.39	84.7	13.1	62.4	2H
870324		6/ 7105/90	HRS	64.9	71.5	0.40	86.4	12.6	65.3	6H
870325		7105/91	HRW	62.4	71.2	0.33	89.7	11.9	63.5	5H
870326		7105/92	HRW	63.3	71.0	0.37	87.2	12.6	64.8	5H
870327		7105/93	HRS	66.8	70.5	0.33	89.0	10.2	61.8	3M
870328		5/ 7105/94	HRW	63.6	70.6	0.34	88.3	12.1	63.8	4H
870329		6/ 7105/95	HWS	66.0	71.9	0.34	89.5	13.2	65.0	5H
870330		7105/96	HRW	63.2	70.9	0.36	87.5	12.6	64.7	4H
870331		7105/97	HWS	64.4	71.2	0.36	88.2	10.7	63.7	6M
870332		7105/98	HRW	65.6	69.2	0.35	86.3	12.9	63.5	2H
870333		7105/99	HRW	62.4	70.8	0.36	87.6	10.9	64.1	8M
870334		7105/100	HRW	62.8	67.3	0.35	84.3	12.9	63.1	5H
870335		7105/101	HRW	62.8	67.7	0.33	86.0	11.8	64.4	4H
870336		7105/102	HRW	64.8	70.3	0.32	88.8	13.3	62.9	2H
870337		7105/103	HRW	64.4	68.7	0.32	87.2	10.4	62.8	7M
870338		6/ 7105/104	HRW	64.4	70.3	0.37	86.6	11.6	65.0	6H
870339		7105/105	HRW	64.4	69.3	0.33	87.8	11.5	65.3	5H

NURSCO 6

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
870312		7105/57	HRW	64.2	64.8	3.6	805	842		6 P-FYELD, LVOL&BCRGR
870313		7105/58	HRW	63.4	62.1	1.7	905	824		4 P-MTIME, LVOL&BCRGR
870314		7105/59	HRW	63.2	65.1	5.0	795	913		5 Q-BCRGR
870315		7105/60	HRW	63.6	63.9	3.6	840	859		6 P-LVOL&BCRGR
870316		7105/61	HRW	66.4	64.6	3.3	910	798		3 P-LVOL Q-BCRGR
870317		7105/62	HRW	64.6	65.7	4.1	855	923		5 Q-BCRGR
870318		7105/63	HRS	68.8	65.6	3.2	1035	837		3 Q-LVOL&BCRGR
870319		7105/85	HRS	66.0	64.1	3.3	1055	937		3 Q-BCRGR
870320		7105/86	HRW	66.9	65.8	3.0	985	917		2
870321		7105/87	HRW	67.4	64.6	3.2	1050	876		3 Q-LVOL&BCRGR
870322		7105/88	HRW	65.4	65.7	3.3	920	939		4 Q-BCRGR
870323		7105/89	HRW	66.2	64.1	2.4	1020	890		2 Q-LVOL&MTIME
870324		7105/90	HRS	68.6	67.0	5.8	970	871		2
870325		7105/91	HRW	64.6	63.7	4.3	935	879		3 Q-LVOL&BCRGR
870326		7105/92	HRW	68.1	66.5	4.3	910	811		3 P-LVOL Q-BCRGR
870327		7105/93	HRS	61.7	62.5	1.8	785	835		7 P-MTIME, LVOL&BCRGR
870328		7105/94	HRW	66.6	65.5	3.1	1015	947		2
870329		7105/95	HWS	68.9	66.7	4.3	1020	884		2 Q-LVOL
870330		7105/96	HRW	68.0	66.4	3.4	925	826		4 P-LVOL Q-BCRGR
870331		7105/97	HWS	64.1	64.4	3.2	880	899		4 Q-LVOL&BCRGR
870332		7105/98	HRW	67.1	65.2	2.1	910	792		3 P-MTIME, LVOL&BCRGR
870333		7105/99	HRW	65.7	65.8	6.5	875	881		5 Q-LVOL&BCRGR
870334		7105/100	HRW	66.7	64.8	2.6	990	872		3 Q-LVOL&BCRGR P-FYELD
870335		7105/101	HRW	66.9	66.1	3.9	940	890		4 Q-LVOL&BCRGR P-FYELD
870336		7105/102	HRW	65.9	63.6	2.6	1000	857		2 P-LVOL
870337		7105/103	HRW	63.9	64.5	4.1	805	842		6 P-LVOL&BCRGR
870338		7105/104	HRW	67.3	66.7	8.9	985	948		4 Q-BCRGR
870339		7105/105	HRW	67.5	67.0	4.2	855	824		5 P-LVOL&BCRGR

COMMENTS: A large majority of these entries are characterized by poor loaf volumes (in respect for the protein content) and heavy/coarse type crumb structures. Many also have associated short and weak dough mixing properties. See "Remarks" for major deficiencies of the selections not footnoted as promising in overall quality.

P = Poor; Q = Questionable

NURSCO 7

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870340		7106/1	HWS	65.2	72.1	0.37	88.2	8.9	63.4	6M
870341		7106/2	HRS	66.0	70.8	0.33	88.9	9.5	62.5	2M
870342		6/7106/3	HRS	65.2	69.5	0.38	85.1	12.2	62.5	5H
870343		6/7106/4	HRS	60.4	70.2	0.37	86.3	11.5	64.1	6H
870344		7106/5	HRS	63.6	69.9	0.39	84.8	11.1	62.6	4M
870345		6/7106/6	HRS	63.2	69.8	0.37	86.0	11.6	63.5	7M
870346		7106/7	HRS	61.2	69.7	0.40	84.2	12.4	62.7	5H
870347		6/7106/8	HRS	62.4	70.3	0.39	85.6	12.1	64.9	6H
870348		7106/9	HRS	64.0	71.3	0.40	86.1	9.6	61.2	5M
870349		7106/10	HRS	65.2	70.3	0.36	87.1	12.4	63.1	4H
870350		7106/11	HRS	63.2	71.0	0.37	87.1	12.0	61.5	6M
870351		6/7106/12	HRS	63.2	71.1	0.37	87.3	11.5	63.3	5H
870352		6/7106/13	HRS	65.2	70.2	0.36	87.0	11.5	61.8	3H
870353		6/7106/14	HRS	65.6	72.9	0.37	89.1	11.1	63.7	5H
870354		6/7106/29	HRS	64.4	68.2	0.36	84.6	13.8	62.4	3H
870355		5/7106/30	HRS	61.6	70.4	0.38	85.8	12.4	64.9	5H
870356		6/7106/31	HRS	62.8	71.0	0.38	86.7	11.8	64.5	5H
870357		5/7106/32	HRS	60.4	70.2	0.37	86.4	12.1	64.6	6H
870358		6/7106/33	HRS	64.8	69.7	0.35	86.8	12.1	61.9	3H
870359		5/7106/34	HRS	63.2	69.8	0.38	85.2	11.9	63.4	4H
870360		6/7106/35	HRS	65.6	71.3	0.36	88.1	12.6	64.1	5H
870361		6/7106/36	HRS	62.8	71.3	0.36	87.8	12.9	63.7	4H
870362		7106/37	HWS	65.2	72.1	0.36	88.7	10.0	61.3	4M
870363		6/7106/38	HRS	62.4	70.0	0.34	87.6	12.3	61.7	8M
870364		7106/39	HRS	64.8	69.8	0.34	87.7	12.7	63.9	4H
870365		7106/40	HRS	66.0	71.0	0.33	89.3	9.9	61.9	2M
870366		7106/41	HRS	60.0	69.4	0.41	83.6	13.6	63.5	5H
870367		7106/42	HRS	63.6	71.2	0.40	86.0	10.7	63.1	7M
870368		5/7106/57	HRS	63.6	67.7	0.36	84.2	14.6	63.6	4H
870369		6/7106/58	HRS	62.8	71.4	0.41	85.5	12.3	63.8	8M
870370		6/7106/59	HRS	62.4	69.5	0.34	87.1	13.5	61.2	7M
870371		6/7106/60	HRS	64.0	69.6	0.34	87.3	13.5	63.1	4H
870372		7106/61	HRS	61.2	69.1	0.42	82.7	13.1	65.9	6H
870373		6/7106/62	HRS	62.4	70.7	0.38	86.4	13.8	65.4	6H
870374		7106/63	HRS	65.2	70.6	0.35	88.1	10.3	61.5	2M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 7

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
870340		7106/1	HWS	62.0	65.1	2.9	805	997	6 Q-BCRGR	
870341		7106/2	HRS	61.7	64.2	2.0	725	880	9 P-MTIME&BCRGR	
870342		7106/3	HRS	64.4	64.2	3.4	980	968	2 Q-FYELD	
870343		7106/4	HRS	65.3	65.8	7.4	915	946	3	
870344		7106/5	HRS	63.4	64.3	3.0	860	916	5 Q-BCRGR	
870345		7106/6	HRS	64.8	65.2	3.7	920	945	2 Q-FYELD	
870346		7106/7	HRS	64.8	64.4	4.2	890	865	4 Q-FYELD&BCRGR	
870347		7106/8	HRS	66.7	66.6	5.3	895	889	3	
870348		7106/9	HRS	60.5	62.9	3.3	750	899	6 Q-BCRGR	
870349		7106/10	HRS	65.2	64.8	3.1	805	780	5 Q-LVOL&BCRGR	
870350		7106/11	HRS	63.2	63.2	3.1	860	860	5 Q-BCRGR	
870351		7106/12	HRS	64.5	65.0	4.7	875	906	3	
870352		7106/13	HRS	63.0	63.5	3.0	900	931	3	
870353		7106/14	HRS	64.5	65.4	3.9	890	946	4 Q-BCRGR	
870354		7106/29	HRS	65.9	64.1	2.8	1040	928	4 Q-BCRGR	
870355		7106/30	HRS	67.0	66.6	4.8	920	895	2	
870356		7106/31	HRS	66.0	66.2	5.2	840	852	2	
870357		7106/32	HRS	66.4	66.3	6.8	940	934	3	
870358		7106/33	HRS	63.7	63.6	2.9	915	909	4 Q-BCRGR&FYELD	
870359		7106/34	HRS	65.0	65.1	3.4	980	986	3	
870360		7106/35	HRS	66.4	65.8	4.7	945	908	2.	
870361		7106/36	HRS	66.3	65.4	3.2	950	894	2	
870362		7106/37	HWS	61.0	63.0	2.8	850	974	7 P-BCRGR	
870363		7106/38	HRS	63.7	63.4	3.5	950	931	3	
870364		7106/39	HRS	66.3	65.6	2.9	895	852	3 Q-FYELD&LVOL	
870365		7106/40	HRS	61.5	63.6	1.5	730	860	9 P-MTIME, LVOL&BCRGR	
870366		7106/41	HRS	66.8	65.2	4.2	980	881	4 Q-FYELD&BCRGR	
870367		7106/42	HRS	63.5	64.8	3.5	855	936	5 Q-FYELD	
870368		7106/57	HRS	67.9	65.3	3.1	1120	959	2 Q-FYELD	
870369		7106/58	HRS	65.8	65.5	4.2	930	911	4 Q-BCRGR	
870370		7106/59	HRS	64.4	62.9	3.0	1010	917	3	
870371		7106/60	HRS	66.3	64.8	2.8	1045	952	3	
870372		7106/61	HRS	68.7	67.6	5.3	930	862	2 Q-FYELD	
870373		7106/62	HRS	68.9	67.1	5.7	990	878	2	
870374		7106/63	HRS	61.5	63.2	1.8	835	940	8 P-MTIME&BCRGR	

NURSCO 7

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
870375		5/7106/64	HRS	59.7	69.8	0.39	85.0	13.3	64.1	6H
870376		<u>6/7106/65</u>	HRS	61.2	70.6	0.36	87.2	15.0	65.1	5H
870377		6/7106/66	HRS	62.7	69.7	0.38	85.1	13.4	63.6	4H
870378		<u>6/7106/67</u>	HRS	60.3	69.6	0.39	84.6	14.2	65.9	5H
870379		<u>6/7106/68</u>	HRS	64.0	70.4	0.35	87.8	13.4	66.3	4H
870380		6/7106/69	HWS	64.5	71.8	0.36	88.8	10.8	64.5	6M
870381		<u>5/7106/70</u>	HRS	64.4	71.9	0.36	88.4	13.0	65.6	5H

DAVIS, CA

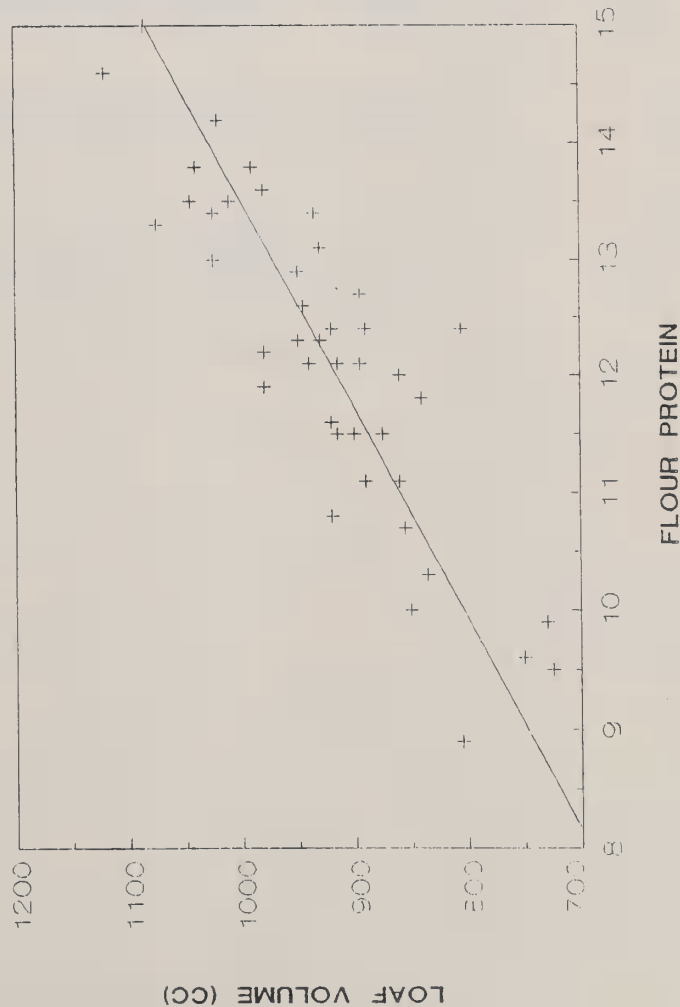
QUALSET/JONES

NURSCO 7

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
870375		7106/64	HRS	67.1	65.8	6.1	1075	994		1Q-FYELD
870376		7106/65	HRS	69.8	66.8	3.3	1085	899		3
870377		7106/66	HRS	66.7	65.3	3.4	1025	938		1Q-FYELD
870378		7106/67	HRS	69.8	67.6	4.6	1020	884		2Q-FYELD
870379		7106/68	HRS	69.4	68.0	3.4	935	848		2Q-LVOL
870380		7106/69	HWS	65.0	66.2	2.6	920	994		4
870381		7106/70	HRS	68.3	67.3	5.2	1025	963		2

COMMENTS: Most of these selections have good overall quality. Several that are footnoted as promising have marginal quality for one factor or another, most often flour yield, as noted in "Remarks".

LOAF VOLUME VS FLOUR PROTEIN
(EXP. 7106)



Statistics
Size 42
Total 38805
Mean 923.9286
Maximum 1120
Minimum 725
Standard Deviation 91.6883
Standard Error 14.1478
95% Confidence 27.7297
95% Confidence 36.5014
a0 243.53
a1 55.9889
a2 0
a3 0
a4 0
a5 0
a6 0
Rval 0.8636

Graph A

NURSCO 8

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870382		7108/1	HWS	64.4	72.0	0.35	89.1	8.3	61.6	4M
870383		7108/2	HRS	64.0	71.7	0.33	89.9	8.3	59.8	1M
870384		7108/3	HRS	65.2	69.9	0.40	84.6	9.2	63.3	8L
870385		7108/4	HRW	63.6	69.8	0.36	86.5	10.6	60.6	4M
870386		7108/5	HRW	63.6	68.3	0.36	84.6	8.9	61.4	6L
870387		7108/6	HRW	63.6	70.7	0.37	87.0	9.6	60.8	8M
870388		7108/7	HRW	65.6	67.1	0.35	84.2	11.0	60.8	2H
870389		6/ 7108/8	HRW	63.6	70.5	0.34	88.0	8.9	62.9	8M
870390		7108/9	HRW	65.2	70.7	0.31	90.3	10.4	59.9	3M
870391		7108/10	HRW	64.0	71.0	0.33	89.4	8.8	62.1	4M
870392		7108/11	HRW	63.6	68.7	0.34	86.3	8.4	61.8	6L
870393		7108/12	HRW	64.4	67.6	0.34	85.2	8.9	63.5	8M
870394		7108/13	HRW	64.8	69.4	0.32	88.3	8.4	59.8	5L
870395		6/ 7108/14	HRW	64.0	69.1	0.33	87.5	8.0	61.4	8L
870396		6/ 7108/15	HRW	63.6	72.2	0.33	90.5	9.5	60.7	6M
870397		7108/16	HRW	61.2	70.4	0.35	87.4	7.8	61.1	7L
870398		7108/17	HRW	63.2	71.6	0.35	89.1	9.2	59.6	8M
870399		7108/18	HRW	63.2	70.8	0.37	87.2	8.8	60.1	8L
870400		6/ 7108/19	HRS	64.4	71.4	0.38	87.2	9.6	62.9	8M
870401		7108/20	HRS	64.8	69.2	0.41	83.5	8.3	59.6	8L
870402		7108/21	HWS	65.6	71.7	0.38	87.5	8.5	61.0	8L
870403		7108/43	HRW	64.0	71.7	0.37	88.1	9.9	60.9	7M
870404		7108/44	HRW	64.0	71.1	0.32	90.1	10.1	61.7	6M
870405		6/ 7108/45	HRW	63.6	73.3	0.33	91.5	10.1	59.6	4M
870406		6/ 7108/46	HRW	63.2	72.0	0.33	90.4	9.7	62.0	7M
870407		7108/47	HWS	64.0	72.0	0.35	89.1	8.6	59.2	3M
870408		6/ 7108/48	HRS	64.8	71.2	0.35	88.4	10.0	61.9	8M
870409		6/ 7108/49	HRW	65.2	70.1	0.31	89.5	8.8	61.7	6M
870410		6/ 7108/50	HRW	63.6	71.4	0.35	88.5	9.2	59.0	8M
870411		7108/51	HRS	65.2	71.6	0.36	88.5	10.2	62.5	8M
870412		7108/52	HRS	64.0	71.3	0.33	89.6	8.4	59.0	2M
870413		6/ 7108/53	HRS	64.4	70.1	0.36	86.8	9.4	61.8	8M
870414		7108/54	HRW	62.8	68.0	0.36	84.8	10.3	60.2	7M
870415		7108/55	HRW	65.2	68.3	0.35	85.4	10.8	60.4	2H
870416		7108/56	HRW	63.6	68.7	0.31	88.0	8.3	59.5	6L

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 8

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
870382		7108/1	HWS	60.6	62.3	2.4	750	855	8 P-BCRGR	
870383		7108/2	HRS	58.8	60.5	1.4	670	775	9 P-MTIME, LVOL&BCRGR	
870384		7108/3	HRS	64.2	65.0	6.7	730	780	4 Q-LVOL&BCRGR	
870385		7108/4	HRW	62.9	62.3	2.5	835	798	5 Q-MTIME&BCRGR	
870386		7108/5	HRW	61.0	62.1	3.3	735	803	6 Q-FYELD&BCRGR	
870387		7108/6	HRW	61.1	61.5	4.2	725	750	4 Q-LVOL&BCRGR	
870388		7108/7	HRW	62.5	61.5	2.2	750	688	8 P-MTIME, LVOL&BCRGR	
870389		7108/8	HRW	62.5	63.6	3.9	770	838	6 Q-BCRGR	
870390		7108/9	HRW	61.0	60.6	1.8	810	785	8 P-MTIME&BCRGR	
870391		7108/10	HRW	61.6	62.8	2.9	840	914	8 P-BCRGR	
870392		7108/11	HRW	60.9	62.5	4.2	715	814	4 Q-FYELD&BCRGR	
870393		7108/12	HRW	63.1	64.2	3.6	780	848	8 P-FYELD&BCRGR	
870394		7108/13	HRW	58.9	60.5	3.7	740	839	5 Q-BCRGR	
870395		7108/14	HRW	60.1	62.1	4.2	725	849	6 Q-BCRGR	
870396		7108/15	HRW	60.9	61.4	3.4	860	891	5 Q-BCRGR	
870397		7108/16	HRW	59.6	61.8	5.0	710	846	8 P-BCRGR	
870398		7108/17	HRW	59.5	60.3	3.5	690	740	7 P-BCRGR	
870399		7108/18	HRW	59.6	60.8	4.7	790	864	7 P-BCRGR	
870400		7108/19	HRS	63.7	64.1	7.0	720	745	4 Q-BCRGR	
870401		7108/20	HRS	59.1	60.8	5.4	690	795	4 Q-FYELD&BCRGR	
870402		7108/21	HWS	60.7	62.2	6.7	785	878	7 P-BCRGR	
870403		7108/43	HRW	62.0	62.1	4.5	740	746	3 Q-LVOL&BCRGR	
870404		7108/44	HRW	63.0	62.9	3.0	855	849	4 Q-BCRGR	
870405		7108/45	HRW	60.9	60.8	3.0	890	884	6 Q-BCRGR	
870406		7108/46	HRW	62.9	63.2	3.6	805	824	3	
870407		7108/47	HWS	58.5	59.9	2.4	770	857	7 P-BCRGR Q-MTIME	
870408		7108/48	HRS	63.1	63.1	6.1	825	825	4 Q-BCRGR	
870409		7108/49	HRW	61.7	62.9	3.7	740	814	5 Q-BCRGR	
870410		7108/50	HRW	59.4	60.2	4.3	845	895	6 Q-BCRGR	
870411		7108/51	HRS	63.9	63.7	6.5	770	758	4 Q-LVOL&BCRGR	
870412		7108/52	HRS	58.1	59.7	2.1	670	769	9 P-MTIME, LVOL&BCRGR	
870413		7108/53	HRS	62.4	63.0	5.8	835	872	4	
870414		7108/54	HRW	62.2	61.9	3.1	805	786	4 Q-FYELD&BCRGR	
870415		7108/55	HRW	62.9	62.1	2.2	720	670	7 Q-FYELD P-MTIME, LVOL.	
870416		7108/56	HRW	59.5	61.2	4.0	730	835	6 Q-FYELD&BCRGR	

NURSCO 8

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870417		6/ 7108/57	HWS	65.2	72.2	0.34	89.9	9.8	61.0	8M
870418		7108/58	HRW	63.2	71.1	0.33	89.2	9.4	59.1	7M
870419		6/ 7108/59	HRW	61.2	70.5	0.35	87.8	8.1	61.2	8L
870420		7108/60	HRW	64.4	68.6	0.34	86.2	9.2	60.0	7M
870421		7108/61	HRW	65.2	70.9	0.30	90.7	11.2	59.8	2H
870422		7108/62	HRW	62.8	69.3	0.35	86.7	11.2	60.3	2H
870423		7108/63	HRW	64.4	67.5	0.34	85.1	8.9	61.4	7M
870424		7108/85	HWS	64.8	72.5	0.34	90.4	9.8	59.6	4M
870425		7108/86	HRW	65.6	67.8	0.33	85.9	12.4	59.8	2H
870426		6/ 7108/87	HRW	63.2	71.3	0.31	90.6	11.5	60.5	6M
870427		5/ 7108/88	HWS	64.8	72.6	0.34	90.3	11.0	58.3	8M
870428		6/ 7108/89	HRW	64.4	69.9	0.33	88.4	10.9	61.0	7M
870429		7108/90	HRS	64.0	71.2	0.33	89.7	9.7	58.6	3M
870430		7108/91	HRW	64.0	67.5	0.32	86.3	10.5	60.2	7M
870431		6/ 7108/92	HRW	63.2	70.6	0.33	88.7	12.9	61.5	5H
870432		6/ 7108/93	HRS	64.4	70.6	0.34	88.3	11.6	61.1	6H
870433		6/ 7108/94	HRW	64.4	69.6	0.30	89.3	10.0	61.7	7M
870434		5/ 7108/95	HRW	62.8	69.9	0.31	89.0	12.5	61.7	5H
870435		7108/96	HRW	63.2	72.7	0.33	90.9	12.1	60.7	3H
870436		7108/97	HRW	62.4	68.7	0.34	86.3	12.4	59.6	4M
870437		7108/98	HRS	63.6	71.5	0.36	88.4	12.2	62.2	7H
870438		5/ 7108/99	HRW	64.0	71.6	0.35	89.0	10.6	57.9	8M
870439		6/ 7108/100	HRW	65.2	70.8	0.31	90.0	12.7	60.2	2H
870440		7108/101	HRW	62.0	68.8	0.31	87.8	13.4	60.6	3H
870441		6/ 7108/102	HRW	64.0	70.3	0.31	89.7	10.4	59.9	6M
870442		6/ 7108/103	HRS	63.2	71.4	0.36	88.2	11.4	60.5	6H
870443		6/ 7108/104	HRW	61.6	70.8	0.33	89.2	9.9	60.1	7M
870444		5/ 7108/105	HRW	64.0	70.8	0.30	90.7	11.5	61.0	4H

NURSCO 8

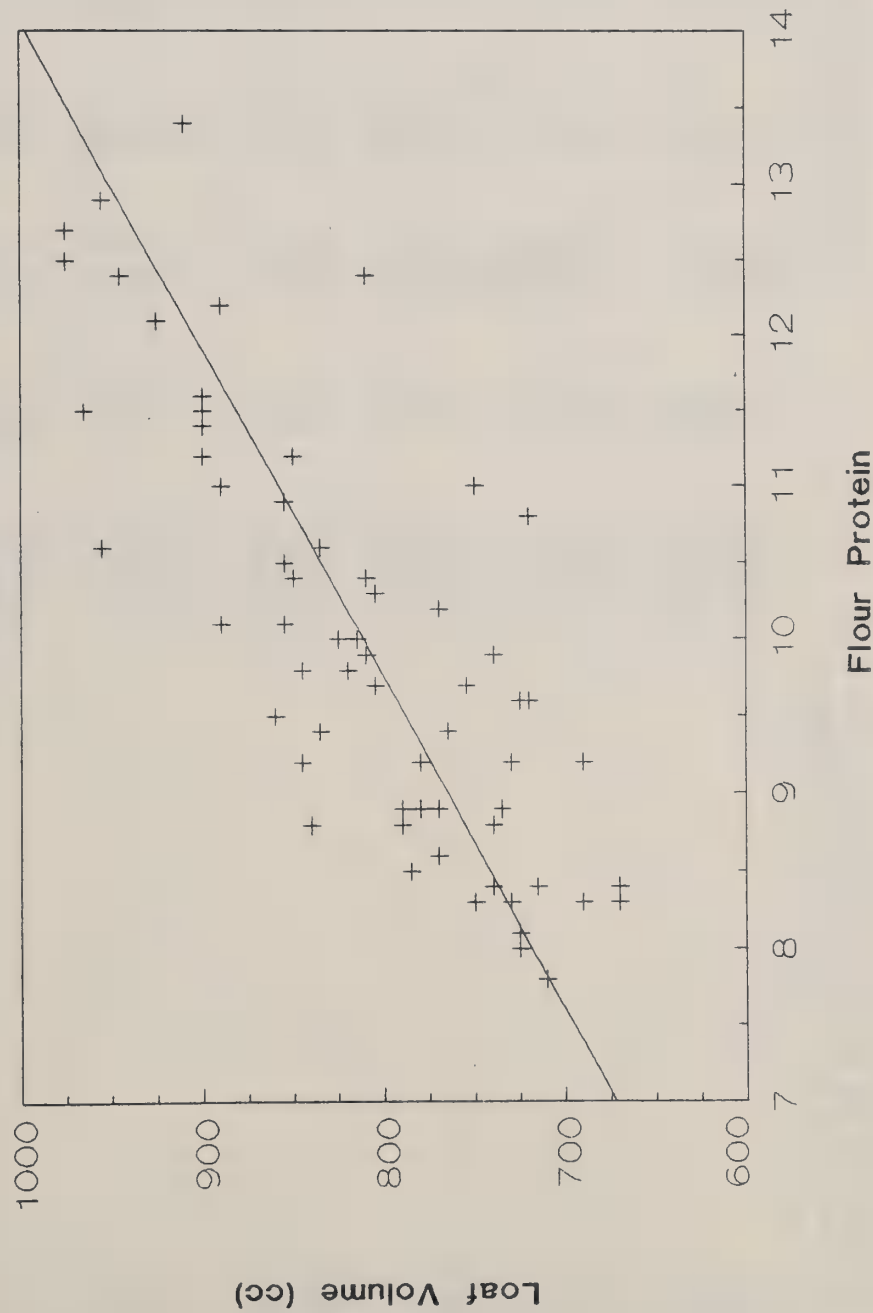
DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
870417		7108/57	HWS	62.5	62.7	7.9	820	832	4 Q-BCRGR	
870418		7108/58	HRW	60.2	60.8	3.7	765	802	8 P-LVOL&BCRGR	
870419		7108/59	HRW	61.0	62.9	5.2	725	843	5 Q-BCRGR	
870420		7108/60	HRW	60.9	61.7	4.2	780	830	6 P-BCRGR	
870421		7108/61	HRW	62.7	61.5	2.1	850	776	3 P-MTIME Q-LVOL	
870422		7108/62	HRW	63.2	62.0	2.1	900	826	6 P-MTIME&BCRGR	
870423		7108/63	HRW	62.0	63.1	3.3	790	858	4 Q-BCRGR P-FYELD	
870424		7108/85	HWS	60.1	60.3	2.2	845	857	6 P-MTIME&BCRGR	
870425		7108/86	HRW	62.9	60.5	2.0	810	661	5 P-MTIME,BCRGR&FYELD	
870426		7108/87	HRW	63.7	62.2	3.4	900	807	2	
870427		7108/88	HWS	61.0	60.0	7.7	890	828	2	
870428		7108/89	HRW	63.6	62.7	4.3	855	799	2	
870429		7108/90	HRS	59.0	59.3	2.1	755	774	8 P-MTIME, LVOL&BCRGR	
870430		7108/91	HRW	62.4	61.9	3.2	855	824	2 P-FYELD	
870431		7108/92	HRW	66.1	63.2	3.7	955	775	3 Q-BCRGR	
870432		7108/93	HRS	64.4	62.8	5.4	900	801	2	
870433		7108/94	HRW	63.4	63.4	3.5	815	815	4 Q-BCRGR	
870434		7108/95	HRW	65.9	63.4	3.5	975	820	2	
870435		7108/96	HRW	64.5	62.4	2.9	925	795	5 Q-BCRGR	
870436		7108/97	HRW	63.7	61.3	2.6	945	796	2 Q-FYELD&MTIME	
870437		7108/98	HRS	66.1	63.9	8.3	890	754	3 Q-LVOL&BCRGR	
870438		7108/99	HRW	60.2	59.6	4.2	955	918	3	
870439		7108/100	HRW	63.6	60.9	2.0	975	808	2 Q-MTIME	
870440		7108/101	HRW	64.7	61.3	2.2	910	699	2 P-MTIME&LVOL	
870441		7108/102	HRW	62.0	61.6	3.6	850	825	4 Q-BCRGR	
870442		7108/103	HRS	63.6	62.2	4.8	900	813	3	
870443		7108/104	HRW	61.7	61.8	4.1	810	816	3	
870444		7108/105	HRW	64.2	62.7	3.1	965	872	3	

COMMENTS: Several of these selections have good overall quality for hard red wheat. Some footnoted as promising have marginal quality in various factors. See "Remarks" for major deficiencies. The scatter gram (page 3) clearly shows the wide range in bread volume at all protein levels.

LOAF VOLUME VS FLOUR PROTEIN (EXP. 7108)



Statistics	Graph A
Size	63
Total	51130
Mean	811.5873
Maximum	975
Minimum	670
Standard Deviation	81.17
Standard Error	10.2265
95% Confidence	20.0439
99% Confidence	26.3843
a0	347.2578
a1	46.4035
a2	0
a3	0
a4	0
a5	0
a6	0
Rval	0.7962

NURSCO 9

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/ 1/		1/ 1/	3/ 3/	
870445		7109/1	HWS	64.4	71.4	0.34	89.9	8.5	58.4	3L
870446		7109/2	HRS	64.8	69.3	0.32	88.9	8.2	58.3	2M
870447		7109/3	HRS	66.0	68.9	0.36	86.3	9.3	59.8	8M
870448		6/7109/4	HRS	62.0	67.0	0.32	86.5	10.6	61.2	8M
870449		7109/5	HRS	64.0	65.0	0.34	83.2	10.7	59.4	4M
870450		7109/6	HRS	63.6	65.5	0.31	85.5	11.4	60.8	6M
870451		7109/7	HRS	62.4	67.4	0.34	85.6	12.0	60.0	4H
870452		7109/8	HRS	62.8	67.4	0.34	85.8	10.8	61.8	5H
870453		7109/9	HRS	64.4	69.3	0.36	86.8	9.1	61.4	7M
870454		6/7109/10	HRS	64.4	68.5	0.34	86.9	9.2	63.6	8M
870455		7109/11	HRS	63.2	66.9	0.35	84.8	11.6	61.0	4H
870456		7109/12	HRS	63.2	66.6	0.34	84.8	10.7	62.5	4H
870457		6/7109/13	HRS	64.4	68.5	0.35	86.4	10.7	59.5	8M
870458		6/7109/14	HRS	65.2	68.8	0.35	86.8	9.7	61.8	8M
870459		7109/29	HRS	62.4	67.2	0.34	85.5	13.0	62.2	4H
870460		6/7109/30	HRS	64.8	66.9	0.31	86.7	10.8	62.8	8M
870461		6/7109/31	HRS	61.6	67.9	0.32	87.3	11.6	59.7	5H
870462		7109/32	HRS	62.0	66.4	0.35	84.4	12.7	62.9	5H
870463		5/7109/33	HRS	64.8	69.4	0.35	87.5	10.4	62.1	8M
870464		7109/34	HRS	62.4	65.4	0.35	83.2	11.6	65.1	5H
870467		5/7109/37	HRS	64.4	70.3	0.34	88.6	10.3	64.4	5H
870468		6/7109/38	HRS	64.8	68.7	0.35	86.7	11.2	62.3	6H
870469		6/7109/39	HRS	63.6	69.1	0.35	87.1	10.0	61.3	7M
870470		7109/40	HRS	63.2	63.2	0.34	81.1	11.7	60.0	3H
870471		5/7109/41	HRS	63.2	69.1	0.35	87.2	11.7	63.1	5H
870472		7109/42	HRS	64.8	70.1	0.33	89.1	9.1	60.1	2M
870473		5/7109/57	HRS	64.8	70.6	0.35	88.5	11.9	62.4	6H
870474		7109/58	HRS	61.2	66.2	0.30	86.5	12.7	61.0	4H
870475		5/7109/59	HRS	63.2	69.1	0.34	87.4	12.6	64.1	5H
870476		6/7109/60	HRS	64.0	69.8	0.34	88.3	11.0	60.7	6M
870477		7109/61	HWS	65.2	70.9	0.34	89.6	10.0	62.4	4M
870478		6/7109/62	HRS	61.6	68.0	0.30	88.4	12.1	64.9	5H
870479		7109/63	HRS	61.6	67.5	0.32	86.9	13.2	64.1	4H
870480		5/7109/64	HRS	64.4	71.3	0.33	90.5	10.9	65.7	5H
870481		6/7109/65	HRS	64.0	70.0	0.35	88.2	11.7	65.0	6H

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 11% Protein.

NURSCO 9

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
870445		7109/1	HWS	57.6	60.1	2.6	720	875	8	Q-MTIME, LVOL P-BCRGR
870446		7109/2	HRS	57.2	60.0	2.0	650	824	9	P-MTIME, LVOL&BCRGR
870447		7109/3	HRS	59.8	61.5	6.5	730	835	5	Q-LVOL&BCRGR
870448		7109/4	HRS	62.5	62.9	5.5	880	905	4	Q-BCRGR
870449		7109/5	HRS	60.8	61.1	2.9	800	819	3	P-LVOL P-FYELD
870450		7109/6	HRS	62.9	62.5	3.3	850	825	2	Q-LVOL P-FYELD
870451		7109/7	HRS	63.2	62.2	3.2	920	858	3	Q-FYELD
870452		7109/8	HRS	63.3	63.5	4.6	845	857	4	Q-FYELD&BCRGR
870453		7109/9	HRS	61.2	63.1	4.1	725	843	5	Q-LVOL&BCRGR
870454		7109/10	HRS	63.5	65.3	4.6	810	922	3	
870455		7109/11	HRS	62.8	62.2	3.7	760	723	6	P-FYELD, LVOL&BCRGR
870456		7109/12	HRS	63.9	64.2	3.7	860	879	6	P-FYELD&BCRGR
870457		7109/13	HRS	60.9	61.2	5.4	870	889	4	Q-BCRGR
870458		7109/14	HRS	62.2	63.5	7.4	790	871	4	Q-BCRGR
870459		7109/29	HRS	65.9	63.9	3.5	905	781	4	Q-FYELD&BCRGR
870460		7109/30	HRS	64.3	64.5	7.7	900	912	2	Q-FYELD (Good Baking)
870461		7109/31	HRS	62.0	61.4	4.8	925	888	2	Q-FYELD (Good Baking)
870462		7109/32	HRS	66.3	64.6	3.9	1015	910	4	Q-FYELD&BCRGR
870463		7109/33	HRS	63.2	63.8	5.8	895	932	3	
870464		7109/34	HRS	67.4	66.8	5.5	870	833	4	P-FYELD Q-BCRGR
870467		7109/37	HRS	65.4	66.1	4.8	870	913	2	
870468		7109/38	HRS	64.2	64.0	7.8	855	843	2	Q-LVOL
870469		7109/39	HRS	61.0	62.0	3.9	830	892	3	
870470		7109/40	HRS	62.4	61.7	3.1	905	862	3	P-FYELD
870471		7109/41	HRS	65.5	64.8	4.4	930	887	2	
870472		7109/42	HRS	59.9	61.8	1.9	735	853	8	P-MTIME, LVOL&BCRGR
870473		7109/57	HRS	65.0	64.1	7.5	920	864	2	
870474		7109/58	HRS	64.4	62.7	3.2	940	835	3	P-FYELD Q-LVOL
870475		7109/59	HRS	67.4	65.8	5.0	1010	911	2	
870476		7109/60	HRS	62.4	62.4	3.6	870	870	3	Q-BCRGR
870477		7109/61	HWS	63.1	64.1	2.6	950	1012	7	P-BCRGR
870478		7109/62	HRS	67.7	66.6	6.2	1000	932	2	
870479		7109/63	HRS	68.0	65.8	4.1	920	784	2	Q-FYELD&LVOL
870480		7109/64	HRS	67.3	67.4	5.0	855	861	2	
870481		7109/65	HRS	62.9	62.2	6.5	925	882	3	

NURSCO 9

DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
870482		7109/66	HRS	62.8	67.2	0.33	85.9	13.8	66.6	5H
870483		7109/67	HRS	64.8	70.7	0.32	90.2	9.6	63.1	3M
870484		7109/68	HRS	62.8	65.0	0.33	83.9	13.2	65.8	4H
870485		<u>5/7109/69</u>	HRS	64.8	69.6	0.33	88.6	11.6	62.8	7H
870486		7109/70	HRS	62.0	68.2	0.35	86.0	12.2	65.4	6H

NURSCO 9

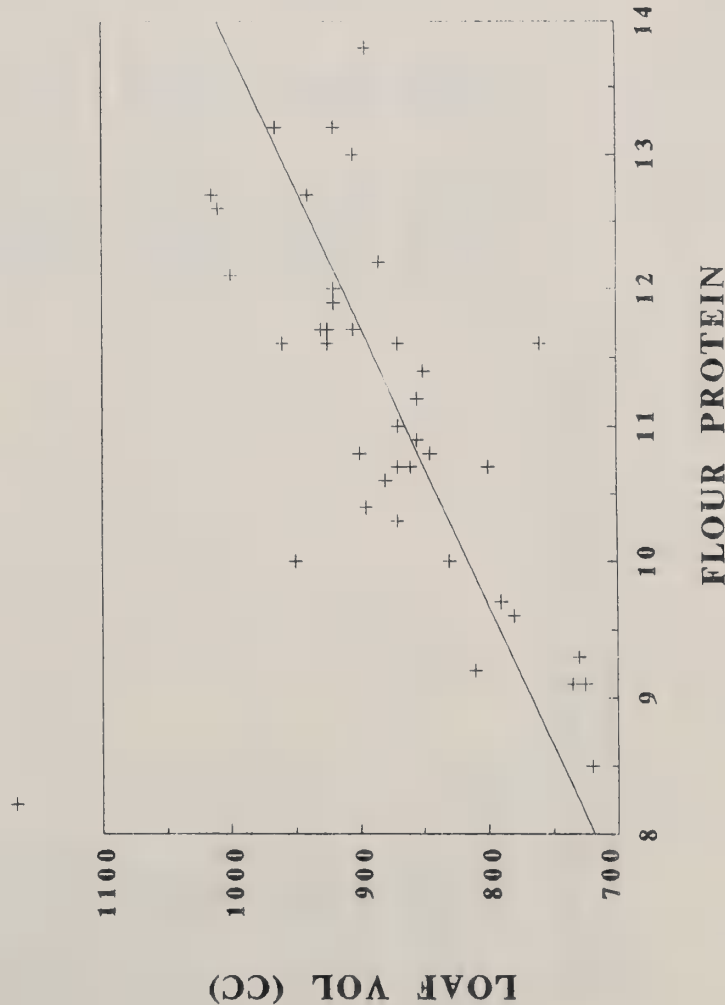
DAVIS, CA

QUALSET/JONES

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
870482		7109/66	HRS	71.1	68.3	3.6	895	721		3 Q-FYELD P-LVOL
870483		7109/67	HRS	62.9	64.3	1.9	780	867		9 P-MTIME&BCRGR
870484		7109/68	HRS	69.7	67.5	3.2	965	829		2 P-FYELD Q-LVOL
870485		7109/69	HRS	65.1	64.5	5.9	960	923		1
870486		7109/70	HRS	68.3	67.1	5.3	885	811		4 Q-FYELD, LVOL&BCRGR

COMMENTS: Several of these selections have good overall hard red wheat quality (see footnotes). Some footnoted are marginal. See "Remarks" for major deficiencies. There is a wide range of baking quality within this material. See scatter gram illustrating varying response of loaf volume to protein.

LOAF VOLUME VS FLOUR PROT (EXP. 7109)



NURSCO 10

DAVIS, CA

KASARDA/CASSMAN

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870487	YECORA ROJO	PD1 N60-LN	HRS	65.0	68.4	0.33	86.8	10.9	61.7	5H
870488	YECORA ROJO	PD1N120-LN	HRS	65.2	69.6	0.37	85.5	9.8	61.4	8M
870489	YECORA ROJO	PD1N180-LN	HRS	65.7	70.4	0.35	87.8	10.1	60.2	8M
870490	YECORA ROJO	PD1N240-LN	HRS	65.4	71.2	0.34	88.9	11.0	59.9	8M
870491	ANZA	PD1 N60-LN	HRS	64.3	69.5	0.36	86.4	7.2	58.9	2L
870492	ANZA	PD1N120-LN	HRS	64.5	71.0	0.36	87.8	8.0	58.3	2L
870493	ANZA	PD1N180-LN	HRS	64.7	71.4	0.36	88.4	8.3	58.3	2L
870494	ANZA	PD1N240-LN	HRS	64.5	71.6	0.36	88.3	7.6	58.4	2L
870495	YECORA ROJO	PD2 N60-LN	HRS	65.8	68.7	0.43	81.5	7.7	61.1	8L
870496	YECORA ROJO	PD2N120-LN	HRS	66.0	69.1	0.42	82.6	8.0	62.0	8L
870497	YECORA ROJO	PD2N180-LN	HRS	65.4	70.0	0.41	83.9	8.4	61.4	8L
870498	YECORA ROJO	PD2N240-LN	HRS	64.9	70.7	0.41	84.6	9.0	62.3	8L
870499	YECORA ROJO	PD2 N60+LN	HRS	65.2	69.5	0.38	84.9	11.3	61.5	5H
870500	YECORA ROJO	PD2N120+LN	HRS	65.5	70.2	0.41	84.5	10.0	61.3	8M
870501	YECORA ROJO	PD2N180+LN	HRS	65.4	70.9	0.38	86.3	10.2	63.7	8M
870502	YECORA ROJO	PD2N240+LN	HRS	65.2	72.0	0.38	87.8	11.0	61.7	8M
870503	ANZA	PD2 N60-LN	HRS	62.7	69.8	0.34	87.6	5.5	57.1	2L
870504	ANZA	PD2N120-LN	HRS	62.7	71.1	0.35	88.2	6.0	55.9	2L
870505	ANZA	PD2N180-LN	HRS	63.7	72.0	0.36	88.5	7.1	56.3	2L
870506	ANZA	PD2N240-LN	HRS	63.5	71.8	0.36	88.6	7.6	55.4	2L
870507	ANZA	PD2 N60+LN	HRS	65.0	71.5	0.36	88.4	8.2	57.1	2L
870508	ANZA	PD2N120+LN	HRS	64.6	72.2	0.37	88.6	7.9	56.1	2L
870509	ANZA	PD2N180+LN	HRS	66.6	71.8	0.36	88.6	8.0	56.0	1L
870510	ANZA	PD2N240+LN	HRS	64.1	72.3	0.35	89.5	8.7	55.2	2L
870511	YECORA ROJO	WS N60-LN	HRS	64.7	67.8	0.42	81.4	7.3	62.1	8L
870512	YECORA ROJO	WSN120-LN	HRS	64.6	69.8	0.41	83.9	8.2	61.1	8L
870513	YECORA ROJO	WSN180-LN	HRS	64.6	69.7	0.37	85.6	9.0	61.4	8M
870514	YECORA ROJO	WSN240-LN	HRS	64.4	72.2	0.34	90.0	12.4	60.8	6H
870515	ANZA	WS N60-LN	HRS	62.2	69.6	0.34	87.5	6.0	55.8	2L
870516	ANZA	WSN120-LN	HRS	62.1	70.7	0.33	89.1	6.7	56.3	2L
870517	ANZA	WSN180-LN	HRS	63.1	71.7	0.32	90.5	7.9	56.6	2L
870518	ANZA	WSN240-LN	HRS	63.5	72.7	0.33	90.9	9.7	56.7	3M
870519	YECORA ROJO	PD2 568-LN	HRS	65.4	69.7	0.40	84.5	8.7	60.3	8M
870520	YECORA ROJO	PD2 628-LN	HRS	65.3	69.9	0.40	84.5	8.5	62.5	8M
870521	YECORA ROJO	PD2 748-LN	HRS	65.6	69.6	0.39	84.5	8.9	60.9	8M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

4/ Observed Values Corrected to 8% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 10

DAVIS, CA

KASARDA/CASSMAN

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
870487	YECORA ROJO	PD1 N60-LN	HRS	66.3	63.4	4.2	895	715	4	Q-LVOL&BCRGR
870488	YECORA ROJO	PD1N120-LN	HRS	64.9	63.1	4.7	860	748	4	Q-LVOL&BCRGR
870489	YECORA ROJO	PD1N180-LN	HRS	64.0	61.9	3.6	865	735	2	Q-LVOL
870490	YECORA ROJO	PD1N240-LN	HRS	64.6	61.6	3.9	905	719	3	Q-LVOL
870491	ANZA	PD1 N60-LN	HRS	59.8	60.6	2.0	620	669	9	P-MTIME, LVOL&BCRGR
870492	ANZA	PD1N120-LN	HRS	59.5	59.5	2.0	655	655	9	P-MTIME, LVOL&BCRGR
870493	ANZA	PD1N180-LN	HRS	59.3	59.0	1.7	715	697	9	P-MTIME, LVOL&BCRGR
870494	ANZA	PD1N240-LN	HRS	58.7	59.1	2.6	625	649	9	P-MTIME, LVOL&BCRGR
870495	YECORA ROJO	PD2 N60-LN	HRS	62.5	62.8	5.6	735	754	8	P-LVOL&BCRGR
870496	YECORA ROJO	PD2N120-LN	HRS	63.7	63.7	5.6	780	780	6	Q-LVOL&BCRGR
870497	YECORA ROJO	PD2N180-LN	HRS	63.5	63.1	5.8	845	820	2	
870498	YECORA ROJO	PD2N240-LN	HRS	65.0	64.0	6.7	890	828	2	
870499	YECORA ROJO	PD2 N60+LN	HRS	66.5	63.2	4.1	925	720	2	Q-LVOL
870500	YECORA ROJO	PD2N120+LN	HRS	65.0	63.0	4.6	885	761	2	Q-LVOL
870501	YECORA ROJO	PD2N180+LN	HRS	67.6	65.4	5.3	880	744	2	Q-LVOL
870502	YECORA ROJO	PD2N240+LN	HRS	66.4	63.4	5.0	950	764	2	Q-LVOL
870503	ANZA	PD2 N60-LN	HRS	56.3	58.8	2.3	535	688	9	P-MTIME, LVOL&BCRGR
870504	ANZA	PD2N120-LN	HRS	55.6	57.6	2.0	575	697	9	P-MTIME, LVOL&BCRGR
870505	ANZA	PD2N180-LN	HRS	56.6	57.5	1.8	645	700	9	P-MTIME, LVOL&BCRGR
870506	ANZA	PD2N240-LN	HRS	56.7	57.1	1.8	615	639	9	P-MTIME, LVOL&BCRGR
870507	ANZA	PD2 N60+LN	HRS	58.5	58.3	1.8	700	688	9	P-MTIME, LVOL&BCRGR
870508	ANZA	PD2N120+LN	HRS	57.7	57.8	1.4	635	641	9	P-MTIME, LVOL&BCRGR
870509	ANZA	PD2N180+LN	HRS	57.7	57.7	1.5	630	630	9	P-MTIME, LVOL&BCRGR
870510	ANZA	PD2N240+LN	HRS	57.6	56.9	1.9	670	627	9	P-MTIME, LVOL&BCRGR
870511	YECORA ROJO	WS N60-LN	HRS	63.1	63.8	7.2	655	698	7	P-LVOL&BCRGR
870512	YECORA ROJO	WSN120-LN	HRS	63.0	62.8	7.2	730	718	6	Q-LVOL&BCRGR
870513	YECORA ROJO	WSN180-LN	HRS	64.1	63.1	6.5	785	723	6	Q-LVOL&BCRGR
870514	YECORA ROJO	WSN240-LN	HRS	66.9	62.5	5.8	940	767	2	
870515	ANZA	WS N60-LN	HRS	55.5	57.5	2.5	565	687	9	P-LVOL&BCRGR
870516	ANZA	WSN120-LN	HRS	56.7	58.0	2.3	620	699	9	P-MTIME, LVOL&BCRGR
870517	ANZA	WSN180-LN	HRS	57.7	57.8	2.1	750	756	8	P-MTIME, LVOL&BCRGR
870518	ANZA	WSN240-LN	HRS	59.1	57.4	2.0	850	746	7	P-MTIME, LVOL&BCRGR
870519	YECORA ROJO	PD2 568-LN	HRS	62.7	62.0	6.2	770	727	6	Q-BCRGR
870520	YECORA ROJO	PD2 628-LN	HRS	64.7	64.2	7.2	795	764	4	Q-BCRGR
870521	YECORA ROJO	PD2 748-LN	HRS	63.5	62.6	6.5	835	779	3	Q-BCRGR

NURSCO 10

DAVIS, CA

KASARDA/CASSMAN

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870522	YECORA ROJO	PD2 888-LN	HRS	65.1	69.6	0.41	83.7	7.7	61.2	8L
870523	YECORA ROJO	PD1 248-LN	HRS	65.3	68.9	0.33	86.9	10.2	61.0	8M
870524	YECORA ROJO	PD1 308-LN	HRS	65.5	69.9	0.36	86.3	9.8	62.1	8M
870525	YECORA ROJO	PD1 498-LN	HRS	65.5	69.7	0.34	87.6	10.2	61.0	8M
870526	ANZA	PD1 163-LN	HRS	64.3	70.3	0.34	87.9	7.5	57.6	2L
870527	ANZA	PD1 263-LN	HRS	64.6	70.1	0.35	87.3	7.9	58.0	2L
870528	ANZA	PD1 393-LN	HRS	64.4	71.0	0.35	88.3	7.7	58.7	2L
870529	ANZA	PD1 433-LN	HRS	64.6	70.5	0.35	87.6	7.5	57.9	2L
870530	ANZA	PD2 553-LN	HRS	63.5	71.7	0.35	88.8	7.1	57.9	2L
870531	ANZA	PD2 613-LN	HRS	63.8	71.0	0.35	88.1	7.3	57.7	2L
870532	ANZA	PD2 763-LN	HRS	63.2	71.2	0.38	87.0	7.0	57.4	2L
870533	ANZA	PD2 833-LN	HRS	63.6	71.2	0.34	88.8	7.2	57.3	2L

NURSCO 10

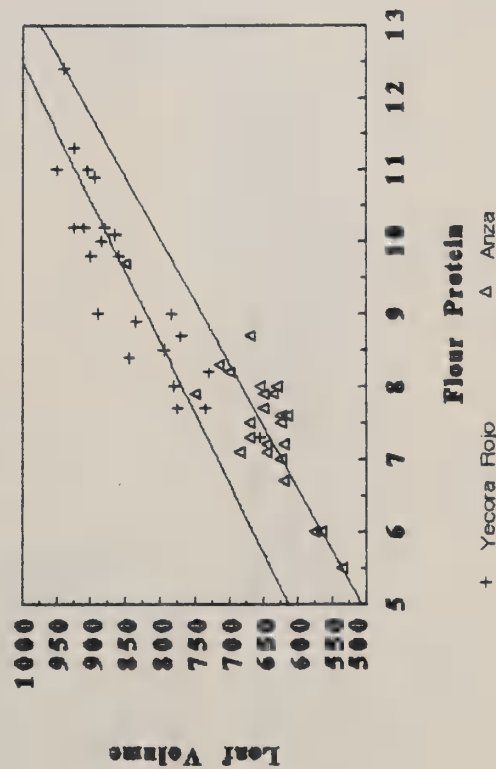
DAVIS, CA

KASARDA/CASSMAN

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					$\frac{3}{2}$			$\frac{4}{4}$		
870522	YECORA ROJO	PD2 888-LN	HRS	62.6	62.9	8.3	775	794	5	Q-BCRGR
870523	YECORA ROJO	PD1 248-LN	HRS	64.9	62.7	3.4	910	774	3	Q-BCRGR
870524	YECORA ROJO	PD1 308-LN	HRS	65.6	63.8	4.1	900	788	3	Q-BCRGR
870525	YECORA ROJO	PD1 498-LN	HRS	64.9	62.7	4.2	925	789	2	
870526	ANZA	PD1 163-LN	HRS	58.3	58.8	2.1	625	656	9	P-MTIME, LVOL&BCRGR
870527	ANZA	PD1 263-LN	HRS	59.1	59.2	2.2	650	656	9	P-MTIME, LVOL&BCRGR
870528	ANZA	PD1 393-LN	HRS	59.6	59.9	1.7	650	668	9	P-MTIME, LVOL&BCRGR
870529	ANZA	PD1 433-LN	HRS	59.6	60.1	2.5	670	701	9	P-MTIME, LVOL&BCRGR
870530	ANZA	PD2 553-LN	HRS	58.2	59.1	2.0	685	740	9	P-MTIME, LVOL&BCRGR
870531	ANZA	PD2 613-LN	HRS	58.2	58.9	1.7	670	713	9	P-MTIME, LVOL&BCRGR
870532	ANZA	PD2 763-LN	HRS	57.6	58.6	2.0	625	686	9	P-MTIME, LVOL&BCRGR
870533	ANZA	PD2 833-LN	HRS	57.7	58.5	2.1	645	694	9	P-MTIME, LVOL&BCRGR

COMMENTS: Analysis were made in cooperation with Dr. Kasarda, ARS, WRR, Albany, CA. Results show the cultivar Yecora Rojo to be below expected performance in bread baking properties. Anza may be slightly poorer than expected also, but it is so poor it is difficult to differentiate. The following is a plot of loaf volume vs flour protein and statistical regression data.

LOAF VOL vs PROTEIN



NURSCO 11

DELTA CO., CA

L.F. JACKSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
870534 ANZA		C1015284	HRS	65.2	72.8	0.32	91.4	9.8	56.4	2M
870535 YECORA ROJO		C1017414	HRS	64.4	71.4	0.35	88.7	11.8	61.7	6H
870536 PHOENIX		C1017962	HWS	64.9	72.6	0.35	89.9	10.2	62.1	3M
870537 YOLO		353	HRS	64.4	72.7	0.33	91.2	9.9	61.5	3M
870538 KLASIC		P1486139	HWS	64.6	72.9	0.33	91.2	11.1	61.9	7H
870539 WESTBRED 911		P1483456	HRS	64.1	69.1	0.32	87.7	9.9	63.0	7M
870540 PROBRAND 775		538	HRS	60.5	71.5	0.38	87.3	11.4	65.5	6H
870541 TADINIA		544	HRS	63.3	69.9	0.33	88.1	10.0	58.5	3M
870542 S8330022		620	HRS	63.7	69.4	0.33	87.8	10.4	55.3	5H
870543 UC628		628	HRS	64.9	71.9	0.36	88.8	10.6	64.2	4H
870544 CM1606		6/638	HRS	64.0	71.5	0.34	89.3	10.6	63.3	7H
870545 S8330501		671	HRS	63.9	69.2	0.35	86.5	11.0	59.9	6M
870546 PH982-38		672	HRS	63.9	68.6	0.32	87.5	10.3	64.2	8M
870547 TAMMY		679	HRS	64.7	72.9	0.34	91.0	11.8	63.1	2H
870548 UC683		683	HRS	64.7	66.9	0.34	84.7	9.3	62.4	4M
870549 UC02		6/702	HRS	65.6	70.2	0.30	89.9	11.3	63.6	8M
870550 UC703		703	HRS	64.7	69.8	0.32	88.5	11.8	61.2	4M
870551 SER182		6/705	HWS	63.3	68.9	0.37	84.9	10.2	61.1	4M
870552 PH83-69		6/716	HRS	64.9	70.8	0.35	88.0	11.9	62.4	8M
870553 PH83-13		6/717	HRS	64.3	70.8	0.31	89.9	11.7	63.4	5H
870554 BH122		733	HRS	64.0	71.5	0.32	90.4	10.1	60.5	4M
870555 NK85S8607		6/734	HRS	61.8	70.5	0.33	88.9	10.1	63.7	5H
870556 NK85S8608		6/735	HRS	61.7	70.4	0.35	87.8	10.7	63.8	8M
870557 NK85S412		736	HRS	64.0	69.5	0.34	87.0	9.9	60.5	7M
870558 NK84S8268		6/737	HRS	63.5	72.3	0.34	90.0	11.0	64.8	6H
870559 DA984-145		744	HRS	64.1	64.4	0.33	82.5	9.9	63.0	6M
870560 PH982-163R		745	HRS	64.2	69.1	0.31	88.6	10.2	63.0	8M
870561 S8630004		748	HRS	64.8	70.8	0.32	89.7	9.7	63.1	7M
870562 UC749		749	HRS	64.7	72.3	0.32	91.3	11.3	63.7	2H
870563 CM28339		750	HRS	63.7	65.2	0.33	83.4	10.5	62.6	6M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Basis Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 11

DELTA CO., CA

L.F. JACKSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
870534	ANZA	C1015284	HRS	56.4	57.6	1.7	660	733	9	P-MTIME, LVOL&BCRGR
870535	YECORA ROJO	C1017414	HRS	64.2	63.4	5.5	915	865	2	P-MTIME, BCRGR
870536	PHOENIX	C1017962	HWS	63.0	63.8	2.1	870	920	8	P-MTIME&BCRGR
870537	YOLO	353	HRS	61.6	62.7	2.1	840	908	8	P-MTIME&BCRGR
870538	KLASIC	P1486139	HWS	63.7	63.6	7.9	965	959	4	
870539	WESTBRED 911	P1483456	HRS	63.6	64.7	4.2	780	848	6	P-BCRGR
870540	PROBRAND 775	538	HRS	67.6	67.2	6.2	905	880	3	
870541	TADINIA	544	HRS	58.7	59.7	1.8	800	862	8	P-MTIME&BCRGR
870542	S8330022	620	HRS	66.4	67.0	4.5	810	847	5	Q-BCRGR
870543	UC628	628	HRS	65.5	65.9	2.8	870	895	6	Q-BCRGR
870544	CM1606	638	HRS	64.6	65.0	8.7	845	870	3	
870545	S8330501	671	HRS	61.6	61.6	3.0	805	805	5	Q-FYELD, LVOL&BCRGR
870546	PH82-38	672	HRS	65.2	65.9	3.7	825	868	5	Q-FYELD&BCRGR
870547	TAMMY	679	HRS	65.6	64.8	2.0	985	935	5	Q-MTIME&BCRGR
870548	UC683	683	HRS	62.4	64.1	2.1	750	855	6	P-FYELD Q-BCRGR
870549	UC02	702	HRS	65.6	65.3	6.3	875	856	4	
870550	UC703	703	HRS	63.7	62.9	2.3	815	765	9	P-MTIME, LVOL&BCRGR
870551	SER182	705	HWS	62.0	62.8	2.9	850	900	4	Q-FYELD
870552	PH83-69	716	HRS	65.0	64.1	5.9	875	819	3	
870553	PH83-13	717	HRS	65.8	65.1	5.3	860	817	2	
870554	BH122	733	HRS	61.3	62.2	2.2	815	871	8	P-MTIME&BCRGR
870555	NK85S8607	734	HRS	64.5	65.4	4.8	790	846	3	
870556	NK85S8608	735	HRS	65.2	65.5	4.1	840	859	4	
870557	NK85S412	736	HRS	61.1	62.2	3.1	800	868	5	Q-BCRGR
870558	NK84S8268	737	HRS	66.5	66.5	5.9	845	845	4	
870559	DA984-145	744	HRS	63.6	64.7	2.6	800	868	6	P-FYELD Q-BCRGR
870560	PH982-163R	745	HRS	63.9	64.7	3.7	865	915	6	Q-BCRGR
870561	S8630004	748	HRS	63.5	64.8	2.8	760	841	8	P-BCRGR
870562	UC749	749	HRS	65.7	65.4	2.0	945	926	5	P-MTIME&BCRGR
870563	CM28339	750	HRS	63.8	64.3	2.6	770	801	8	P-FYELD, LVOL&BCRGR

COMMENTS: Several of these selections appear to be about equal to Yecora Rojo, Klasic, and Probrand 775. See "Remarks" for major deficiencies of those not footnoted as promising in overall quality.

P = Poor; Q = Questionable

NISSHIN MILLS PNW VARIETY/LOCATION STUDY

ID, OR, WA

NURSCO 12

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
870564	SOUTH IDAHO	STEPHENS	SWW	56.5	70.0	0.42	77.7	9.8	54.0	2M
870565	SOUTH IDAHO	DAWS	SWW	62.7	69.7	0.40	80.4	7.4	55.3	2L
870566	SOUTH IDAHO	HILL	SWW	63.3	73.1	0.40	85.3	8.4	54.7	2L
870567	CAMAS PRARIE	STEPHENS	SWW	58.9	69.9	0.37	81.6	8.3	54.5	2L
870568	CAMAS PRARIE	HILL	SWW	60.7	73.1	0.37	86.8	8.7	53.2	2L
870569	CAMAS PRARIE	DAWS	SWW	58.3	68.0	0.37	78.5	9.0	55.2	3M
870570	PALOUSE	STEPHENS	SWW	60.7	72.0	0.35	86.5	8.3	54.4	2L
870571	PALOUSE	HILL	SWW	63.7	74.7	0.36	90.1	8.6	54.1	2M
870572	PALOUSE	DAWS	SWW	61.6	72.5	0.34	87.1	8.2	54.7	2L
870573	BIG BEND	LEWJAIN	SWW	61.8	72.0	0.35	85.6	8.6	54.0	2M
870574	BIG BEND	HILL	SWW	62.2	73.3	0.35	88.7	9.0	54.2	2M
870575	BIG BEND	DAWS	SWW	61.7	71.1	0.35	83.9	8.9	53.3	3L
870576	BIG BEND	TRES	CLUB	61.3	73.5	0.38	87.6	9.8	46.5	1M
870577	BIG BEND	CREW	CLUB	59.4	73.7	0.39	86.3	7.3	49.9	2L
870578	BIG BEND	MORO	CLUB	61.0	73.7	0.37	87.1	9.7	51.7	2M
870579	BIG BEND	SPRAGUE	SWW	60.2	71.7	0.33	87.1	6.6	54.6	2L
870580	WALLA WALLA/PENDLETON	STEPHENS	SWW	59.8	72.9	0.34	87.5	8.4	54.3	2L
870581	WALLA WALLA/PENDLETON	DAWS	SWW	62.4	72.3	0.33	87.6	6.4	53.0	8L
870582	WALLA WALLA/PENDLETON	HILL	SWW	60.3	73.7	0.36	87.4	9.3	53.9	2M
870583	COLUMBIA RIVER	STEPHENS	SWW	59.1	71.1	0.34	84.8	6.6	52.7	7L
870584	COLUMBIA RIVER	HILL	SWW	59.2	73.4	0.35	88.4	6.1	52.5	2L
870585	COLUMBIA RIVER	CREW	CLUB	59.1	74.2	0.36	88.9	5.9	50.7	1L
870586	WILLAMETTE	STEPHENS	SWW	59.6	69.7	0.38	79.8	7.9	54.8	5L
870587	WILLAMETTE	HILL	SWW	59.5	71.4	0.45	79.5	8.1	53.7	5L
870588	WILLAMETTE	YAMHILL	SWW	58.8	70.2	0.37	82.5	7.1	55.1	7L
870589	BLUE MT.	HILL	SWW	63.6	72.3	0.35	86.4	8.8	54.9	2M
870590	BLUE MT.	YAMHILL	SWW	56.8	66.2	0.42	72.9	9.5	55.6	2M
870591	3 YEAR REFERENCE CONTROL	STEPHENS	SWW	61.6	72.1	0.33	86.5	6.5	53.6	1L

LABNUM	VARIETY	IDNO	CLASS	VISC	AWRC	CODI	CAVOL	SCSOR	WHEAT FN	FLOUR FN	WHEAT DSI	FLOUR DSI
870564	SOUTH IDAHO	STEPHENS	SWW	70	60.0	8.67	1238	69.0	375	354	0.069	0.047
870565	SOUTH IDAHO	DAWS	SWW	72	62.0	8.72	1278	76.0	365	371	0.061	0.045
870566	SOUTH IDAHO	HILL	SWW	55	56.0	8.92	1258	72.0	369	385	0.059	0.046
870567	CAMAS PRARIE	STEPHENS	SWW	62	60.0	8.86	1298	77.0	358	378	0.103	0.057
870568	CAMAS PRARIE	HILL	SWW	69	56.0	8.99	1293	77.0	371	380	0.093	0.055
870569	CAMAS PRARIE	DAWS	SWW	86	62.0	8.61	1370	84.0	324	408	0.194	0.058
870570	PALOUSE	STEPHENS	SWW	66	58.0	8.72	1318	79.0	368	377	0.081	0.048
870571	PALOUSE	HILL	SWW	85	58.0	8.82	1348	80.0	355	368	0.078	0.048
870572	PALOUSE	DAWS	SWW	79	58.0	8.81	1320	80.0	362	364	0.092	0.048
870573	BIG BEND	LEWJAIN	SWW	103	60.0	9.09	1328	80.0	403	451	0.052	0.045
870574	BIG BEND	HILL	SWW	130	58.0	8.75	1303	79.0	357	345	0.061	0.044
870575	BIG BEND	DAWS	SWW	142	60.0	8.59	1290	78.0	314	372	0.199	0.084
870576	BIG BEND	TRES	CLUB	70	58.0	8.99	1315	78.0	384	429	0.059	0.047
870577	BIG BEND	CREW	CLUB	48	56.0	9.02	1358	84.0	414	415	0.063	0.051
870578	BIG BEND	MORO	CLUB	140	54.0	9.19	1255	74.0	347	425	0.082	0.048
870579	BIG BEND	SPRAGUE	SWW	38	60.0	9.32	1385	84.0	335	391	0.067	0.050
870580	WALLA WALLA/PENDLETON	STEPHENS	SWW	64	56.0	9.02	1290	76.0	354	408	0.054	0.042
870581	WALLA WALLA/PENDLETON	DAWS	SWW	60	62.0	8.85	1293	75.0	213	224	1.167	0.626
870582	WALLA WALLA/PENDLETON	HILL	SWW	103	56.0	8.87	1273	74.0	384	330	0.060	0.062
870583	COLUMBIA RIVER	STEPHENS	SWW	38	60.0	9.17	1310	78.0	342	359	0.071	0.053
870584	COLUMBIA RIVER	HILL	SWW	35	58.0	9.15	1335	81.0	301	329	0.130	0.073
870585	COLUMBIA RIVER	CREW	CLUB	31	60.0	9.15	1378	84.0	369	367	0.068	0.064
870586	WILLAMETTE	STEPHENS	SWW	61	58.0	8.87	1330	80.0	345	408	0.077	0.050
870587	WILLAMETTE	HILL	SWW	70	58.0	8.80	1293	78.0	416	378	0.098	0.051
870588	WILLAMETTE	YAMHILL	SWW	58	60.0	9.16	1348	83.0	278	316	0.225	0.098
870589	BLUE MT.	HILL	SWW	109	58.0	8.54	1273	77.0	420	378	0.076	0.049
870590	BLUE MT.	YAMHILL	SWW	101	62.0	8.60	1165	65.0	158	259	0.701	0.154
870591	3 YEAR REFERENCE CONTROL	STEPHENS	SWW	39	60.0	9.14	1298	80.0	290	328	0.125	0.067

COMMENTS: These samples were evaluated for quality attributes in cooperation with U.S. Wheat Associates, Inc. and Nisshin Flour Mills. It is the second year of a 3-year project to determine what the variability in end-use quality is due to variety, location, and year. At the end of the 3rd year a statistical analysis will be used to determine that variability, therefore, no attempt to score or rate this material at this time.

ID, OR, WA

NURSCO 13

LABNUM	VARIETY	BUSHELS	PCT*	CLASS	TWT	WMIST	WPROT	FN	DSI	FYELD	MSCOR	FASH	FPROT	FABS
870592	NORTH IDAHO REGION 1	6351824	14.5	SWW	61.8	10.0	9.7	345	.108	73.3	86.0	0.39	8.5	56.5
870593	SOUTH IDAHO REGION 2	2736018	6.2	SWW	60.8	9.3	10.1	381	.070	73.2	83.6	0.44	8.8	55.9
870594	SOUTH IDAHO REGION 2	794800	.	HRW	63.7	9.8	11.1	387	.131	70.2	81.5	0.41	9.6	64.8
870595	SOUTH IDAHO REGION 2	795100	.	HRS	62.2	9.1	13.0	435	.062	71.9	80.5	0.47	11.5	69.3
870596	PALOUSE REGION 3	7117918	16.3	SWW	61.2	9.3	10.4	337	.089	73.6	87.6	0.39	9.0	57.3
870597	BIG BEND REGION 4	10233760	23.4	SWW	59.7	9.9	10.5	367	.207	72.9	84.5	0.43	8.9	56.9
870598	BIG BEND REGION 4	3052546	83.2	CLUB	60.5	9.7	10.3	298	.236	73.1	84.8	0.41	9.0	56.1
870599	BIG BEND REGION 4	5622513	.	HRW	63.5	10.1	11.7	488	.070	71.3	83.4	0.42	10.9	67.8
870600	BIG BEND REGION 4	555834	.	HRS	62.3	10.0	14.2	433	.073	71.1	79.8	0.46	12.3	68.0
870601	WALLA WALLA REGION 5	4209642	9.6	SWW	59.8	9.5	10.4	398	.084	69.6	79.9	0.36	8.8	54.4
870602	NORTH PENDLETON REGION 6	2253340	5.1	SWW	59.5	9.4	9.3	388	.070	73.5	87.4	0.38	8.1	53.6
870603	COLUMBIA RIVER REGION 7	7428694	17.0	SWW	59.5	9.6	8.7	409	.072	72.1	84.7	0.38	7.5	52.9
870604	COLUMBIA RIVER REGION 7	431563	11.8	CLUB	58.2	10.4	7.5	380	.096	72.5	84.6	0.39	6.6	51.1
870605	WILLAMETTE VALLEY REGION 8	983927	2.2	SWW	58.4	11.5	9.5	358	.236	71.5	82.2	0.39	8.2	53.0
870606	WATERVILLE REGION 9	1945552	4.4	SWW	61.0	10.0	9.2	390	.058	70.4	82.7	0.39	7.6	55.7
870607	WATERVILLE REGION 9	184653	5.0	CLUB	61.2	9.6	9.6	340	.107	74.4	87.4	0.40	8.7	55.0
870608	WATERVILLE REGION 9	17007	.	HRW	62.7	10.4	11.4	385	.194	71.2	83.8	0.40	10.4	66.9
870609	HORSE HEAVEN REGION 10	41000	0.1	SWW	59.7	10.1	9.6	386	.070	70.3	78.4	0.43	7.8	52.3
870610	HORSE HEAVEN REGION 10	20000	.	HRW	64.4	9.2	10.1	430	.074	72.0	81.9	0.43	9.4	62.1
870611	BLUE MOUNTAIN REGION 11	485000	1.1	SWW	62.2	9.4	10.1	516	.113	72.9	84.5	0.41	8.4	55.3
Average														
		43786675		SWW	60.3	9.7	9.9	373	.116	72.5	84.8	0.40	8.5	55.6
		3668762		Club	60.3	9.8	9.9	310	.213	73.1	84.9	0.41	8.7	55.5
				Western White**	60.3	9.7	9.9	364	.131	72.6	84.8	0.40	8.5	55.6

*Percent of the soft white wheat and/or club wheat crop sampled.

**A blend of 85% SWW and 15% Club.

NURSCO 13

ID, OR, WA

LABNUM	VARIETY	BUSHEL5	PCT*	CLASS	FPEAK	FSTAB	LVOL	MTIME	BCRGR	CODI	CAVOL	SCSOR	WTIN	NOSCO
870592	NORTH IDAHO REGION 1	6351824	14.5	SWW	3.0	4.0				8.50	1275	74.0	361	76
870593	SOUTH IDAHO REGION 2	2736018	6.2	SWW	2.7	2.2				8.97	1290	76.0	364	75
870594	SOUTH IDAHO REGION 2	794800	.	HRW	5.9	10.0	825	3.1	5	7.94				
870595	SOUTH IDAHO REGION 2	795100	.	HRS	7.0	6.5	975	3.2	5	7.52				
870596	PALOUSE REGION 3	7117918	16.3	SWW	3.0	3.3				8.54	1290	74.0	356	71
870597	BIG BEND REGION 4	10233760	23.4	SWW	2.2	2.9				8.69	1260	74.0	346	72
870598	BIG BEND REGION 4	3052546	83.2	CLUB	1.7	1.7				8.56	1285	74.0	354	70
870599	BIG BEND REGION 4	5622513	.	HRW	6.7	10.5	880	3.6	4	7.77				
870600	BIG BEND REGION 4	555834	.	HRS	10.7	11.9	1040	4.4	2	7.39				
870601	WALLA WALLA REGION 5	4209642	9.6	SWW	3.4	3.8				8.66	1330	81.0	350	71
870602	NORTH PENDLETON REGION 6	2253340	5.1	SWW	2.1	3.9				8.90	1290	78.0	335	70
870603	COLUMBIA RIVER REGION 7	7428694	17.0	SWW	1.3	1.5				8.94	1290	77.0	314	70
870604	COLUMBIA RIVER REGION 7	431563	11.8	CLUB	1.3	2.5				8.85	1330	82.0	309	71
870605	WILLAMETTE VALLEY REGION 8	983927	2.2	SWW	2.0	5.2				8.70	1260	74.0	327	70
870606	WATERVILLE REGION 9	1945552	4.4	SWW	2.7	3.7				8.86	1375	83.0	364	75
870607	WATERVILLE REGION 9	184653	5.0	CLUB	2.0	0.6				8.67	1325	79.0	364	73
870608	WATERVILLE REGION 9	17007		HRW	6.9	5.5	890	2.6	4	7.94				
870609	HORSE HEAVEN REGION 10	41000	0.1	SWW	1.7	2.3				8.57	1305	76.0	314	67
870610	HORSE HEAVEN REGION 10	20000		HRW	6.1	9.5	845	3.4	4	7.76				
870611	BLUE MOUNTAIN REGION 11	485000	1.1	SWW	2.0	3.7				8.75	1275	74.0	329	69
	Avg.			SWW	2.5	3.1				8.71	1288	76.0	345	72
	Club			Club	1.7	1.7				8.60	1292	75.0	349	70
	Western White**			2.3	2.9					8.69	1288	76.0	346	72

*Percent of the soft white wheat and/or club wheat crop sampled.

**A blend of 85% SWW and 15% Club.

NURSCO 14

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870612	COMB*TAN71	6/5	HRS	62.8	69.4	0.32	88.0	12.7	61.7	4H
870613	COMB*TAN71	5/7	HRS	62.4	70.0	0.38	85.6	11.9	62.6	8M
870614	COMB*TAN71	8	HWS	61.9	67.6	0.34	85.1	11.1	62.3	6M
870615	COMB* PORTOLA	10	HRS	60.8	68.5	0.34	86.0	11.0	64.5	7M
870616	COMB* PORTOLA	11	HRS	62.4	71.2	0.34	89.0	11.5	62.2	4M
870617	COMB* PORTOLA	12	HWS	59.9	68.3	0.41	82.4	10.8	63.8	8M
870618	YECORA ROJO	20	HRS	63.2	70.4	0.35	87.4	11.6	62.3	8M
870619	COMB* PORTOLA	25	HRS	60.1	70.7	0.32	89.3	11.2	64.6	7M
870620	YEC70 * ANZA	26	HRS	63.9	72.0	0.28	92.8	10.7	61.3	3M
870621	SON64*((TZPP*Y54)*JUST 3)*PII62	30	HRS	61.1	66.4	0.37	82.2	10.4	63.0	6M
870622	SON64*((TZPP*Y54)*JUST 3)*PII62	31	HRS	61.1	67.4	0.39	82.6	11.3	62.4	2H
870623	SON64*((TZPP*Y54)*JUST 3)*PII62	34	HRS	61.9	67.5	0.37	83.7	11.4	62.8	7M
870624	SON64*((TZPP*Y54)*JUST 3)*PII62	35	HWS	61.1	65.9	0.33	84.0	10.8	62.2	7M
870625	SON64*((TZPP*Y54)*JUST 3)*ANZA	6/36	HRS	63.0	68.4	0.31	87.7	9.3	63.6	6M
870626	SON64*((TZPP*Y54)*JUST 3)*ANZA	39	HRS	63.7	68.2	0.31	87.6	10.6	61.3	4M
870627	SON64*((TZPP*Y54)*JUST 3)*ANZA	42	HRS	64.1	69.9	0.32	88.7	9.6	64.2	4M
870628	SON64*((TZPP*Y54)*JUST 3)*ANZA	43	HRS	64.8	68.3	0.33	86.5	10.6	62.7	3M
870629	SON64*((TZPP*Y54)*JUST 3)*ANZA	45	HRS	64.0	70.1	0.31	89.3	10.7	62.0	4M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Basis Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 14

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
870612	COMB*TAN71	5	HRS	65.1	63.4	3.2	940	835	2	3Q-BCRGR
870613	COMB*TAN71	7	HRS	65.2	64.3	3.9	910	854	3	P-FYELD Q-BCRGR
870614	COMB*TAN71	8	HWS	63.1	63.0	3.0	905	899	4	Q-FYELD&BCRGR
870615	COMB* PORTOLA	10	HRS	66.2	66.2	3.6	920	920	5	Q-MTIME&BCRGR
870616	COMB* PORTOLA	11	HRS	63.4	62.9	2.2	985	954	5	Q-FYELD&BCRGR
870617	COMB* PORTOLA	12	HWS	65.3	65.5	5.1	870	882	2	P-BCRGR
870618	YECORA ROJO	20	HRS	64.6	64.0	6.9	975	938	6	P-MTIME&BCRGR
870619	COMB* PORTOLA	25	HRS	65.5	65.3	3.7	870	858	5	P-FYELD Q-BCRGR
870620	YEC70 * ANZA	26	HRS	61.7	62.0	1.9	950	969	5	Q-FYELD,MTIME&BCRGR
870621	SON64*((TZPP*Y54)*JUST 3)*PIT62	30	HRS	64.1	64.7	3.1	880	917	4	Q-FYELD&BCRGR
870622	SON64*((TZPP*Y54)*JUST 3)*PIT62	31	HRS	63.4	63.1	1.9	925	906	2	P-BCRGR
870623	SON64*((TZPP*Y54)*JUST 3)*PIT62	34	HRS	64.9	64.5	3.3	900	875	5	Q-FYELD,MTIME&BCRGR
870624	SON64*((TZPP*Y54)*JUST 3)*PIT62	35	HWS	62.7	62.9	3.1	875	887	4	Q-FYELD&BCRGR
870625	SON64*((TZPP*Y54)*JUST 3)*ANZA	36	HRS	62.6	64.3	2.7	880	985	6	P-BCRGR
870626	SON64*((TZPP*Y54)*JUST 3)*ANZA	39	HRS	62.1	62.5	2.8	865	890	8	P-MTIME&BCRGR
870627	SON64*((TZPP*Y54)*JUST 3)*ANZA	42	HRS	63.5	64.9	2.2	840	927	6	P-MTIME&BCRGR
870628	SON64*((TZPP*Y54)*JUST 3)*ANZA	43	HRS	63.0	63.4	1.6	955	980	8	P-MTIME&BCRGR
870629	SON64*((TZPP*Y54)*JUST 3)*ANZA	45	HRS	61.9	62.2	2.4	890	909		

COMMENTS: Major deficiency of these selections was poor bread crumb grain. See "Remarks". None are equal to Yecora Rojo.

NURSCO 15

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
870630	SON 64*((TZPP*Y54)*JUST3)*ANZA	2	HRS	63.8	73.6	0.34	91.7	10.8	62.4	4M
870631	SON 64*((TZPP*Y54)*JUST3)*ANZA	5	HRS	63.7	72.8	0.35	89.9	10.0	59.7	4M
870632	SON 64*((TZPP*Y54)*JUST3)*ANZA	7	HRS	64.0	72.6	0.33	90.8	10.6	62.1	4M
870633	SON 64*((TZPP*Y54)*JUST3)*ANZA	8	HRS	64.7	70.4	0.32	89.1	10.4	60.3	5M
870634	SON 64*((TZPP*Y54)*JUST3)*ANZA	12	HRS	65.3	70.5	0.35	87.8	10.3	61.9	4M
870635	SON 64*((TZPP*Y54)*JUST3)*ANZA	6/16	HRS	64.2	70.1	0.34	87.8	10.4	61.1	6M
870636	YECORA ROJO	20	HRS	63.0	71.6	0.36	88.6	11.3	62.7	7H
870637	SON 64*((TZPP*Y54)*JUST3)*ANZA	22	HRS	63.1	72.4	0.36	89.2	10.3	61.5	6M
870638	SON 64*((TZPP*Y54)*JUST3)*ANZA	6/23	HRS	63.2	71.8	0.33	90.3	10.7	60.8	4M
870639	SON 64*((TZPP*Y54)*JUST3)*ANZA	31	HRS	62.7	70.4	0.33	88.7	9.2	61.6	4M
870640	LAGOA VERMELHA*ANZA	33	HRS	63.2	71.1	0.36	87.9	10.3	60.5	6L
870641	(TAC*PENJ62)*ANZA	37	HRS	64.0	70.7	0.34	88.4	9.9	59.8	6M
870642	SAMACA68*ANZA	43	HRS	62.1	67.6	0.36	84.1	12.1	61.4	6H
870643	SAMACA68*ANZA	6/45	HRS	62.6	69.6	0.36	86.2	10.8	63.6	8M

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
870630	SON 64*((TZPP*Y54)*JUST3)*ANZA	2	HRS	61.9	62.1	3.0	880	892	8 P-BCRGR	
870631	SON 64*((TZPP*Y54)*JUST3)*ANZA	5	HRS	60.9	61.9	3.0	890	952	6 Q-BCRGR	
870632	SON 64*((TZPP*Y54)*JUST3)*ANZA	7	HRS	62.4	62.8	3.1	935	960	6 Q-BCRGR	
870633	SON 64*((TZPP*Y54)*JUST3)*ANZA	8	HRS	61.4	62.0	2.6	855	892	5 Q-MTIME&BCRGR	
870634	SON 64*((TZPP*Y54)*JUST3)*ANZA	12	HRS	62.9	63.6	2.6	875	918	4 Q-MTIME&BCRGR	
870635	SON 64*((TZPP*Y54)*JUST3)*ANZA	16	HRS	62.2	62.8	3.1	930	967	2	
870636	YECORA ROJO	20	HRS	64.2	63.9	6.2	965	946	3	
870637	SON 64*((TZPP*Y54)*JUST3)*ANZA	22	HRS	61.5	62.2	3.1	885	928	6 Q-BCRGR	
870638	SON 64*((TZPP*Y54)*JUST3)*ANZA	23	HRS	62.2	62.5	2.2	985	1004	4 Q-MTIME&BCRGR	
870639	SON 64*((TZPP*Y54)*JUST3)*ANZA	31	HRS	61.5	63.3	2.9	890	1002	6 Q-BCRGR	
870640	LAGOA VERMELHA*ANZA	33	HRS	61.5	62.2	3.9	800	843	7 P-LVOL&BCRGR	
870641	(TAC*PENJ62)*ANZA	37	HRS	60.4	61.5	3.1	880	948	6 Q-BCRGR	
870642	SAMACA68*ANZA	43	HRS	64.2	63.1	4.7	875	807	4 P-FYELD&LVOL	
870643	SAMACA68*ANZA	45	HRS	64.1	64.3	4.6	935	947	3	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: See "Remarks" for major deficiencies of selections not footnoted as promising in overall quality.

NURSCO 16

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
870644	SAMACA68*ANZA	6/1	HRS	64.0	71.3	0.31	90.4	10.7	60.7	4M
870645	SAMACA68*ANZA	<u>5/</u> 4	HRS	63.2	71.0	0.36	87.8	11.7	63.1	5H
870646	SAMACA68*ANZA	5	HRS	63.4	71.0	0.32	89.6	10.8	59.9	4M
870647	MOTI*ANZA	10	HRS	64.1	73.0	0.34	90.9	10.9	60.3	4M
870648	YECORA ROJO	20	HRS	63.3	69.1	0.34	86.7	11.3	63.0	6H
870649	COUTICHES* YECORA ROJO	28	HWS	60.5	61.7	0.38	76.8	11.1	61.4	8M
870650	COUTICHES* YECORA ROJO	30	HRS	62.8	69.3	0.34	86.8	12.3	62.1	6H
870651	COUTICHES* YECORA ROJO	<u>5/</u> 31	HRS	61.2	71.3	0.35	88.4	11.9	61.6	4H
870652	COUTICHES* YECORA ROJO	33	HRS	61.8	68.0	0.34	85.5	12.3	61.7	6H
870653	COUTICHES* YECORA ROJO	35	HWS	62.2	67.4	0.35	84.7	10.1	60.0	7M
870654	COUTICHES* YECORA ROJO	37	HRS	61.2	67.2	0.37	83.4	11.8	60.8	8M
870655	COUTICHES* PORTOLA	45	HRS	62.3	70.0	0.38	85.8	11.3	61.4	4H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
870644	SAMACA68*ANZA	1	HRS	61.1	61.4	2.5	930	949	4	Q-BCRGR
870645	SAMACA68*ANZA	4	HRS	65.5	64.8	3.9	985	942	4	Q-BCRGR
870646	SAMACA68*ANZA	5	HRS	61.4	61.6	2.5	950	962	5	Q-BCRGR&MTIME
870647	MOTI*ANZA	10	HRS	60.9	61.0	2.4	940	946	4	Q-BCRGR&MTIME
870648	YECORA ROJO	20	HRS	65.0	64.7	7.5	915	896	2	
870649	COUTICHES* YECORA ROJO	28	HWS	63.2	63.1	6.5	940	934	3	VP-FYELD
870650	COUTICHES* YECORA ROJO	30	HRS	65.1	63.8	5.2	935	854	3	Q-LVOL&BCRGR
870651	COUTICHES* YECORA ROJO	31	HRS	64.2	63.3	2.9	995	939	2	
870652	COUTICHES* YECORA ROJO	33	HRS	64.7	63.4	6.1	980	899	3	Q-FYELD
870653	COUTICHES* YECORA ROJO	35	HWS	60.8	61.7	3.6	905	961	4	Q-FYELD&BCRGR
870654	COUTICHES* YECORA ROJO	37	HRS	63.3	62.5	6.5	910	860	2	Q-FYELD&LVOL
870655	COUTICHES* PORTOLA	45	HRS	63.4	63.1	2.6	860	841	8	P-MTIME, LVOL&BCRGR

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: There is a distinct range of quality among these sister selections. See "Remarks" for major deficiencies.

NURSCO 17

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870656	COUTICHES* PORTOLA	1	HRS	62.5	64.9	0.37	80.8	11.1	62.1	4H
870657	COUTICHES* PORTOLA	2	HRS	62.4	68.7	0.37	84.9	11.1	62.3	4H
870658	COUTICHES* PORTOLA	7	HRS	62.4	66.8	0.38	82.5	11.1	62.2	4H
870659	COUTICHES* PORTOLA	8	HRS	62.2	69.0	0.37	84.9	11.1	61.7	4H
870660	CHAMBARD* YECORA ROJO	15	HRS	61.1	65.4	0.31	84.6	10.2	59.7	6M
870661	CHAMBARD* PORTOLA	17	HRS	61.8	68.6	0.36	85.4	10.5	62.4	7M
870662	YECORA ROJO	20	HRS	63.3	68.3	0.37	84.2	11.5	62.2	6H
870663	(JARAL'S)*SARIC70)*ANZA	24	HRS	64.3	71.6	0.31	91.1	11.0	61.3	2H
870664	(JARAL'S)*SARIC70)*ANZA	25	HRS	61.7	65.9	0.35	83.1	10.3	60.4	4M
870665	(JARAL'S)*SARIC70)*166R	5/29	HRS	64.0	68.2	0.31	87.3	10.5	62.4	6M
870666	(JARAL'S)*SARIC70)*166R	30	HRS	64.2	65.9	0.28	86.3	10.1	62.8	7M
870667	(JARAL'S)*SARIC70)*166R	6/31	HRS	63.1	67.2	0.31	86.5	10.9	61.0	6M
870668	(JARAL'S)*SARIC70)*166R	6/33	HRS	63.4	66.6	0.32	85.1	10.8	62.9	7M
870669	(BHR*(MY48*MY54))*B*YR	36	SWS	63.6	64.3	0.33	82.5	10.6	60.8	8M
870670	(BHR*(MY48*MY54))*B*YR	37	SWS	63.2	63.3	0.33	81.0	10.3	61.4	6M
870671	(BHR*(MY48*MY54))*B*YR	38	SWS	62.5	65.5	0.33	83.7	10.5	61.3	8M
870672	(BHR*(MY48*MY54))*B*YR	6/41	SWS	62.4	67.2	0.31	86.1	9.5	57.8	8M
870673	(BHR*(MY48*MY54))*BEZ*YR	42	SRS	63.4	65.7	0.29	85.7	10.0	58.0	8M
870674	(BHR*(MY48*MY54))*BEZ*YR	44	SRS	64.9	66.5	0.31	85.7	10.7	58.3	8M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 17

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
870656	COUTICHES* PORTOLA	1	HRS	63.9	63.8	2.9	875	869	8 VP-FYELD, LVOL&BCRGR	
870657	COUTICHES* PORTOLA	2	HRS	64.1	64.0	3.2	905	899	5 Q-BCRGR	
870658	COUTICHES* PORTOLA	7	HRS	64.0	63.9	2.9	900	894	5 P-FYELD Q-BCRGR	
870659	COUTICHES* PORTOLA	8	HRS	63.5	63.4	2.8	925	919	5 Q-BCRGR	
870660	CHAMBARD* YECORA ROJO	15	HRS	60.6	61.4	3.6	910	960	4 P-FYELD	
870661	CHAMBARD* PORTOLA	17	HRS	63.6	64.1	3.2	855	886	5 P-LVOL&BCRGR	
870662	YECORA ROJO	20	HRS	64.4	63.9	6.3	1000	969	3 Q-BCRGR&MTIME	
870663	(JARAL S'*SARIC70)*ANZA	24	HRS	63.0	63.0	2.1	950	950	5 P-FYELD Q-MTIME&BCRGR	
870664	(JARAL S'*SARIC70)*ANZA	25	HRS	61.4	62.1	2.4	890	933	5 P-FYELD Q-MTIME&BCRGR	
870665	(JARAL S'*SARIC70)*166R	29	HRS	63.6	64.1	2.8	925	956	2	
870666	(JARAL S'*SARIC70)*166R	30	HRS	63.6	64.5	3.1	875	931	4 P-FYELD	
870667	(JARAL S'*SARIC70)*166R	31	HRS	62.6	62.7	3.1	960	966	2	
870668	(JARAL S'*SARIC70)*166R	33	HRS	64.4	64.6	3.3	940	952	2 Q-FYELD	
870669	(BHR*(MY48*MY54))*B*YR	36	SWS	60.6	61.0	4.4	1025	1049	2 P-FYELD	
870670	(BHR*(MY48*MY54))*B*YR	37	SWS	60.4	61.1	3.4	1005	1047	3 P-FYELD	
870671	(BHR*(MY48*MY54))*B*YR	38	SWS	60.5	61.0	4.4	980	1010	2 Q-FYELD	
870672	(BHR*(MY48*MY54))*B*YR	41	SWS	57.0	58.5	4.5	925	1015	2 Q-FYELD	
870673	(BHR*(MY48*MY54))*BEZ*YR	42	SRS	57.2	58.2	4.5	880	940	2 Q-FYELD	
870674	(BHR*(MY48*MY54))*BEZ*YR	44	SRS	58.7	59.0	6.0	850	868	3 Q-LVOL&BCRGR	

COMMENTS: Note that selections 36-44 have soft endosperm, which were low in flour yield but good in baking quality.

NURSCO 18

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870675	(BHR*(MY48*MY54))*BEZ*166R	1	HRS	62.3	65.0	0.32	83.6	10.8	60.2	7M
870676	(BHR*(MY48*MY54))*BEZ *166R	4	HRS	63.1	65.5	0.40	79.9	11.5	59.9	5H
870677	(BB'S'*SDY)*((GZ*GB)*MAG27)*A.	6/8	HRS	64.2	67.2	0.35	84.1	11.8	62.2	5H
870678	(BB'S'*SDY)*((GZ*GB)*MAG27)*YR	6/11	HRS	63.5	70.3	0.41	84.5	10.3	61.2	8M
870679	(BB'S'*SDY)*((GZ*GB)*MAG27)*YR	6/12	HRS	62.9	68.3	0.38	83.7	10.4	62.0	8M
870680	(BB'S'*SDY)*((GZ*GB)*MAG27)*YR	15	HRS	62.8	69.1	0.46	80.4	10.7	61.7	8M
870681	(BB S'*SDY)*((GZ*GB)*MAG27)*YR	6/16	HRS	63.1	67.5	0.37	83.3	10.8	61.9	8M
870682	YOLO	19	HRS	64.1	71.6	0.34	89.3	9.0	59.4	3M
870683	YECORA ROJO	20	HRS	63.6	68.2	0.35	85.1	11.3	62.0	8M
870684	(BB'S'*SDY)*((GZ*GB)*MAG27)*166R	6/21	HRS	63.3	70.2	0.38	85.7	10.3	63.1	8M
870685	(BB'S'*SDY)*((GZ*GB)*MAG27)*166R	6/22	HRS	63.7	68.5	0.38	83.8	10.5	61.8	8M
870686	(INIA*(TOB S'*NAPO))*ANZA	35	HRS	64.2	71.0	0.35	88.1	10.6	62.8	6M
870687	(INIA*(TOB S'*NAPO))*YR	36	HRS	64.5	69.2	0.33	87.6	11.7	62.8	8M
870688	(INIA*(TOB S'*NAPO))*YR	5/37	HRS	64.4	70.1	0.36	86.6	10.7	62.0	8M
870689	(RON'S'*COMB)*ANZA	39	HRS	61.5	66.0	0.38	81.6	10.7	62.2	3M
870690	(RON'S'*COMB)*ANZA	6/40	HRS	62.0	68.7	0.37	84.9	10.6	62.9	7M

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
870675	(BHR*(MY48*MY54))*BEZ*166R	1	HRS	60.7	60.9	3.7	970	982	2 P-FYELD	
870676	(BHR*(MY48*MY54))*BEZ *166R	4	HRS	61.1	60.6	3.9	1050	1019	2 P-FYELD	
870677	(BB'S'*SDY)*((GZ*GB)*MAG27)*A.	8	HRS	62.7	61.9	3.3	1000	950	2	
870678	(BB'S'*SDY)*((GZ*GB)*MAG27)*YR	11	HRS	61.2	61.9	5.3	870	913	4 Q-BCRGR	
870679	(BB S'*SDY)*((GZ*GB)*MAG27)*YR	12	HRS	63.1	63.7	4.6	870	907	4 Q-BCRGR	
870680	(BB'S'*SDY)*((GZ*GB)*MAG27)*YR	15	HRS	63.1	63.4	4.8	870	889	6 P-BCRGR	
870681	(BB S'*SDY)*((GZ*GB)*MAG27)*YR	16	HRS	62.4	62.6	5.6	865	877	4 Q-BCRGR	
870682	YOLO	19	HRS	59.1	61.1	2.0	770	894	9	
870683	YECORA ROJO	20	HRS	64.0	63.7	6.1	910	891	3	
870684	(BB'S'*SDY)*((GZ*GB)*MAG27)*166R	21	HRS	64.1	64.8	5.9	855	898	3	
870685	(BB'S'*SDY)*((GZ*GB)*MAG27)*166R	22	HRS	63.0	63.5	5.5	855	886	3	
870686	(INIA*(TOB S'*NAPO))*ANZA	35	HRS	64.1	64.5	4.0	825	850	5 Q-BCRGR	
870687	(INIA*(TOB S'*NAPO))*YR	36	HRS	65.2	64.5	5.7	850	807	5 Q-BCRGR	
870688	(INIA*(TOB S'*NAPO))*YR	37	HRS	63.4	63.7	4.5	885	904	2	
870689	(RON'S'*COMB)*ANZA	39	HRS	63.6	63.9	2.0	955	974	3 Q-MTIME P-FYELD	
870690	(RON'S'*COMB)*ANZA	40	HRS	64.2	64.6	3.6	880	905	3	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: IDNO's 1 & 4 are excellent in baking quality but poor in milling. Several footnoted are equal to or better than Yecora Rojo.

NURSCO 19

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
870691	(RON'S)*COMB)*166R	11	HRS	62.9	71.5	0.39	86.5	10.8	62.4	8M
870692	(RON S)*COMB)*166R	14	HRS	62.5	72.9	0.40	87.4	10.0	63.3	8M
870693	YECORA ROJO	20	HRS	62.6	72.1	0.41	86.5	11.5	61.4	8M
870694	(HK39MA*(OFN*K338-*ANZA	21	HRS	60.7	69.3	0.35	86.6	10.1	62.7	8M
870695	(HK38MA*(OFN*K338AA))*-YR	6/ 29	HWS	61.0	70.2	0.34	87.9	11.0	61.0	8M
870696	(HK38MA*(OFN*K338AA))*-YR	6/ 32	HWS	62.7	70.1	0.34	87.8	9.4	59.5	8M
870697	HK38MA*(OFN*K338AA))*-#166R	38	HWS	62.8	70.4	0.34	88.4	11.0	63.4	8M
870698	HK38MA*(OFN*K338AA))*-#166R	5/ 39	HWS	62.7	71.5	0.35	88.8	11.2	62.5	8M
870699	HK38MA*(OFN*K338AA))*-#166R	6/ 40	HRS	63.6	71.3	0.37	87.7	10.6	61.7	8M
870700	HK38MA*(OFN*K338AA))*-#166R	6/ 41	HWS	62.6	69.3	0.34	86.9	10.7	60.8	8M

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
870691	(RON'S)*COMB)*166R	11	HRS	63.9	64.1	4.1	910	922	4 Q-BCRGR	
870692	(RON S)*COMB)*166R	14	HRS	64.0	65.0	4.7	895	957	6 P-BCRGR	
870693	YECORA ROJO	20	HRS	63.6	63.1	6.7	965	934	2	
870694	(HK39MA*(OFN*K338-*ANZA	21	HRS	63.5	64.4	5.6	890	946	4 Q-BCRGR	
870695	(HK38MA*(OFN*K338AA))*-YR	29	HWS	62.7	62.7	6.6	905	905	3	
870696	(HK38MA*(OFN*K338AA))*-YR	32	HWS	59.6	61.2	5.5	890	989	2	
870697	HK38MA*(OFN*K338AA))*-#166R	38	HWS	65.1	65.1	6.2	920	920	4 Q-BCRGR	
870698	HK38MA*(OFN*K338AA))*-#166R	39	HWS	64.4	64.2	5.1	925	913	2	
870699	HK38MA*(OFN*K338AA))*-#166R	40	HRS	63.0	63.4	4.8	885	910	3	
870700	HK38MA*(OFN*K338AA))*-#166R	41	HWS	62.2	62.5	5.6	915	934	2	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: Note that IDNO's 29-39 and 41 are hard white wheats.

NURSCO 20

LABNUM	VARIETY	IDNO	CLASS	TWT lb/bu	WMIST	WPROT	FYELD %	FASH %	MSCOR	FPROT %	MABS	FABS
870701 6483		6-29	SWW	61.6	9.6	8.5	71.5	0.38	84.1	7.5	52.5	49.1
870702 2270		6-30	SWW	61.5	9.5	9.6	71.0	0.38	82.9	8.3	51.5	50.6
870703 6482		6-30	SWW	61.9	9.2	9.5	70.7	0.39	81.2	8.0	51.8	50.3
870704 6479		7-1	SWW	61.3	9.8	9.7	71.6	0.39	82.6	8.1	51.7	51.0
870705 3966		7-3	SWW	61.2	10.0	10.5	71.0	0.40	81.7	9.0	53.5	50.9
870706 2408		7-6	SWW	62.4	9.0	10.0	73.3	0.38	86.0	8.8	51.5	49.4
870707 6480		7-6	SWW	63.4	9.0	9.1	70.4	0.37	82.4	7.9	51.9	50.1
870708 6481		7-8	SWW	62.2	10.0	10.0	71.4	0.40	83.0	8.4	52.4	51.4
870709 2411		7-9	SWW	62.2	9.2	10.9	71.7	0.39	82.9	9.3	52.9	51.9
870710 2414		7-10	SWW	61.9	9.4	9.9	71.7	0.37	83.9	8.4	51.4	50.6
870711 3399		7-12	SWW	61.3	9.4	10.2	71.5	0.38	84.3	8.2	52.5	51.5
870712 8349		7-15	SWW	61.0	10.8	10.1	71.8	0.39	84.6	8.6	52.3	49.5
870713 8350		7-15	SWW	62.2	10.0	9.8	72.1	0.39	84.7	8.3	52.4	50.9
870714 3391		7-15	SWW	62.6	9.7	9.7	72.3	0.37	85.4	8.2	51.4	51.0
870715 3392		7-17	SWW	61.9	9.8	9.7	71.6	0.39	82.7	8.5	52.9	51.4
870716 3397		7-22	SWW	62.3	9.4	10.9	71.8	0.39	84.3	9.0	53.5	52.0
870717 3398		7-24	SWW	61.3	9.7	9.5	72.6	0.38	85.4	7.9	52.2	49.2
870718 2419		7-24	SWW	62.9	9.6	9.6	71.1	0.39	83.0	7.8	52.5	51.5
870719 3111		7-24	SWW	62.0	9.1	10.1	71.1	0.30	87.8	8.2	53.4	51.2
870720 3906		7-24	SWW	60.4	9.6	10.4	71.0	0.38	83.9	8.7	51.7	49.6
870721 3112		7-25	SWW	61.4	9.6	9.9	70.7	0.38	79.6	8.0	52.3	50.3
870722 3912		7-27	SWW	61.8	9.7	9.8	72.2	0.39	83.1	8.3	53.6	51.2
870723 3115		7-27	SWW	61.2	9.6	10.2	71.8	0.40	83.1	8.7	52.3	52.1
870724 3116		7-28	SWW	61.0	10.5	8.8	71.0	0.36	83.4	7.9	53.0	48.7
870725 3120		7-30	SWW	61.2	10.0	9.7	71.0	0.38	82.7	8.3	52.1	51.1
870726 3122		7-31	SWW	61.2	10.2	9.7	72.1	0.40	83.5	8.2	52.7	51.5
870727 3123		8-1	SWW	60.7	11.0	9.4	71.1	0.38	83.6	7.9	51.9	50.4
870728 3914		8-1	SWW	61.3	9.7	10.4	71.7	0.38	84.5	8.3	52.8	50.3
870729 3126		8-3	SWW	59.7	11.2	10.0	70.8	0.40	82.5	8.3	52.5	51.4
870730 3135		8-4	SWW	61.2	10.2	9.8	70.4	0.37	82.0	8.0	52.7	50.7
870731 3918		8-4	SWW	62.0	9.8	10.1	72.4	0.39	85.3	8.3	52.7	51.0
870732 3128		8-4	SWW	60.0	10.8	9.8	69.2	0.39	79.1	8.3	52.3	51.8
870733 3130		8-6	SWW	60.0	10.9	9.7	69.8	0.38	81.3	8.2	53.0	51.8
870734 7499		8-10	SWW	61.0	9.9	9.9	69.8	0.42	78.4	8.5	54.3	52.7
870735 3924		8-11	SWW	61.9	9.5	10.0	71.3	0.40	81.2	8.6	52.1	52.1

NURSCO 20

LABNUM	VARIETY	IDNO	CLASS	FPEAK	FSTAB Min.	CODI	CAVOL cc	SCSOR	WTIN %	NOSCO	WFN	WDSI
870701 6483		6-29	SWW	1.0	2.5	9.37	1260	74.0	355	73	406	.101
870702 2270		6-30	SWW	1.7	3.8	8.80	1280	75.0	342	72	413	.097
870703 6482		6-30	SWW	2.0	3.7	8.69	1260	74.0	347	75	395	.086
870704 6479		7-1	SWW	1.7	3.7	8.62	1255	72.0	353	71	377	.097
870705 3966		7-3	SWW	3.0	3.6	8.82	1240	71.0	351	75	429	.075
870706 2408		7-6	SWW	2.1	4.9	8.99	1230	70.0	352	71	398	.074
870707 6480		7-6	SWW	1.7	3.4	8.96	1290	78.0	350	73	367	.079
870708 6481		7-8	SWW	2.0	3.5	8.71	1275	74.0	358	71	386	.077
870709 2411		7-9	SWW	2.7	4.5	8.87	1245	71.0	357	70	426	.087
870710 2414		7-10	SWW	1.8	3.9	8.70	1255	74.0	350	74	370	.088
870711 3399		7-12	SWW	1.8	3.4	8.75	1275	76.0	358	73	403	.069
870712 8349		7-15	SWW	1.3	4.8	8.66	1265	72.0	345	73	417	.076
870713 8350		7-15	SWW	1.2	3.4	8.82	1265	77.0	355	72	409	.081
870714 3391		7-15	SWW	1.6	3.8	8.62	1270	74.0	345	75	414	.112
870715 3392		7-17	SWW	1.9	3.8	8.84	1260	72.0	348	72	376	.076
870716 3397		7-22	SWW	2.4	4.7	8.67	1270	75.0	360	73	409	.075
870717 3398		7-24	SWW	1.5	4.4	8.89	1245	71.0	343	74	408	.079
870718 2419		7-24	SWW	1.7	3.8	8.52	1225	69.0	343	73	416	.068
870719 3111		7-24	SWW	1.6	4.2	8.80	1245	71.0	358	72	392	.068
870720 3906		7-24	SWW	1.5	3.7	8.74	1235	72.0	348	71	280	.302
870721 3112		7-25	SWW	2.3	3.2	8.74	1275	77.0	352	73	383	.099
870722 3912		7-27	SWW	1.4	3.1	8.61	1250	71.0	339	73	370	.085
870723 3115		7-27	SWW	2.4	3.2	8.81	1215	71.0	352	74	356	.105
870724 3116		7-28	SWW	1.2	3.2	9.06	1270	77.0	355	73	362	.099
870725 3120		7-30	SWW	2.2	3.6	9.09	1245	75.0	344	73	382	.111
870726 3122		7-31	SWW	1.5	2.6	8.76	1265	77.0	344	73	374	.141
870727 3123		8-1	SWW	1.9	4.0	8.89	1270	76.0	338	72	345	.110
870728 3914		8-1	SWW	2.6	4.0	8.91	1265	76.0	336	70	413	.068
870729 3126		8-3	SWW	1.4	3.5	8.70	1275	74.0	330	71	349	.103
870730 3135		8-4	SWW	1.3	2.8	8.84	1255	75.0	331	71	302	.176
870731 3918		8-4	SWW	1.4	3.1	8.47	1180	72.0	352	74	403	.081
870732 3128		8-4	SWW	1.4	3.2	8.76	1225	70.0	343	73	380	.090
870733 3130		8-6	SWW	1.5	3.7	8.87	1245	71.0	342	74	362	.103
870734 7499		8-10	SWW	1.4	4.3	9.04	1180	69.0	343	73	302	.095
870735 3924		8-11	SWW	1.7	3.1	8.85	1225	70.0	336	73	322	.068

NURSCO 20

LABNUM	VARIETY	IDNO	CLASS	TWT lb/bu	WMIST	WPROT	FYELD %	FASH %	MSCOR	FPROT %	MABS	FABS
870736 3925		8-12	SWW	61.3	9.7	9.8	72.2	0.40	83.1	8.4	53.2	52.3
870737 6265		8-13	SWW	62.2	9.7	10.1	72.4	0.39	83.2	8.4	53.6	51.9
870738 6267		8-13	SWW	61.8	10.0	9.9	70.7	0.40	79.3	8.8	53.1	52.6
870739 6269		8-13	SWW	61.8	10.7	9.6	71.2	0.39	81.8	8.4	52.1	51.0
870740 3921		8-17	SWW	62.0	9.5	9.9	71.0	0.39	81.9	8.5	53.7	51.2
870741 3934		8-20	SWW	62.3	9.5	9.4	69.9	0.40	80.0	8.2	52.0	50.5
870742 3983		8-20	SWW	61.4	10.0	9.7	70.3	0.40	79.3	8.6	53.2	50.7
870743 7385		8-20	SWW	60.4	10.4	9.7	71.9	0.41	81.4	8.6	51.6	52.0
870744 7386		8-20	SWW	60.4	10.2	9.7	71.8	0.41	81.0	8.5	53.1	51.4
870745 3984		8-21	SWW	60.7	10.2	10.1	69.2	0.40	78.8	8.8	53.8	53.3
870746 3985		8-21	SWW	61.2	10.4	9.9	70.4	0.40	80.3	8.7	54.1	52.7
870747 3986		8-21	SWW	65.0	9.6	9.0	70.1	0.38	80.1	8.1	53.0	52.5
870748 3987		8-21	SWW	61.6	9.2	10.3	71.7	0.39	82.1	9.3	54.9	53.7
870749 3935		8-21	SWW	61.4	9.1	10.0	70.7	0.36	81.7	8.7	53.7	51.9
870750 7387		8-24	SWW	59.3	11.1	10.4	70.2	0.38	80.5	8.5	54.4	52.1
870751 5371		8-25	SWW	61.7	9.3	10.1	72.3	0.40	83.5	8.7	54.9	52.8
870752 5378		8-25	SWW	61.5	10.2	9.1	69.4	0.39	80.1	8.0	53.4	50.4
870753 7475		8-25	SWW	60.7	9.8	10.0	71.1	0.38	83.1	8.7	52.1	53.3
870754 5370		8-25	SWW	60.8	9.0	9.8	70.9	0.39	82.1	8.8	53.8	52.7
870755 5373		8-25	SWW	61.5	9.3	9.7	71.3	0.39	83.0	8.3	52.2	52.8

NURSCO 20

LABNUM	VARIETY	IDNO	CLASS	FPEAK	FSTAB Min.	CODI	CAVOL cc	SCSOR	WTIN %	NOSCO	WFN	WDSI
870736 3925		8-12	SWM	1.4	3.0	8.71	1270	74.0	351	73	382	.084
870737 6265		8-13	SWM	1.2	3.2	9.00	1260	77.0	345	72	379	.066
870738 6267		8-13	SWM	1.3	2.9	9.25	1255	80.0	349	73	386	.135
870739 6269		8-13	SWM	1.3	3.3	8.76	1265	75.0	350	73	371	.078
870740 3921		8-17	SWM	1.6	3.3	8.86	1265	73.0	350	74	387	.072
870741 3934		8-20	SWM	1.4	3.1	9.05	1280	72.0	356	73	380	.085
870742 3983		8-20	SWM	1.6	3.2	9.11	1230	72.0	335	70	388	.074
870743 7385		8-20	SWM	1.8	3.5	8.90	1295	76.0	357	73	400	.087
870744 7386		8-20	SWM	1.5	2.5	9.10	1310	73.0	359	73	346	.095
870745 3984		8-21	SWM	2.8	3.7	8.94	1255	69.0	354	72	281	.209
870746 3985		8-21	SWM	1.1	3.1	8.91	1255	72.0	355	73	389	.086
870747 3986		8-21	SWM	1.2	3.0	9.20	1280	74.0	337	72	411	.089
870748 3987		8-21	SWM	2.0	2.7	8.77	1265	74.0	355	72	360	.103
870749 3935		8-21	SWM	1.5	3.9	8.64	1255	71.0	352	71	366	.085
870750 7387		8-24	SWM	2.2	4.3	8.90	1285	73.0	344	73	391	.117
870751 5371		8-25	SWM	1.8	3.5	8.82	1265	71.0	359	73	314	.075
870752 5378		8-25	SWM	1.7	3.8	8.82	1270	72.0	340	71	398	.068
870753 7475		8-25	SWM	1.5	2.7	9.01	1295	75.0	360	73	379	.119
870754 5370		8-25	SWM	1.5	2.7	8.85	1260	72.0	358	72	367	.114
870755 5373		8-25	SWM	1.4	3.2	8.72	1215	69.0	359	73	419	.070

COMMENTS: These analysis were made in cooperation with the U.S.

Wheat Associates, Inc. It was the sixth in a series of collections of western white cargo loaded during the period of June 29 - August 25/87. Procedures used are standard methods previously reported. Some small variation is present from cargo to cargo but generally there is good uniformity. The best was probably cargo #6483 on 6-29-87 and the poorest was 3918 on 8-4-87.

N Obs	Variable	N	Minimum	Maximum	Mean	Std Dev
55	TWT	55	59.300	65.000	61.493	0.912
	WMIST	55	9.000	11.200	9.842	0.559
	WPROT	55	8.500	10.900	9.838	0.438
	FYELD	55	69.200	73.300	71.185	0.883
	FASH	55	0.300	0.420	0.387	0.017
	MSCOR	55	78.400	87.800	82.480	1.957
	FPROT	55	7.500	9.300	8.398	0.361
	MABS	55	51.400	54.900	52.765	0.875
	FABS	55	48.700	53.700	51.309	1.121
	FPEAK	55	1.000	3.000	1.702	0.445
	FSTAB	55	2.500	4.900	3.504	0.574
	CODI	55	8.000	9.370	8.832	0.211
	CAVOL	55	1180.000	1310.000	1256.636	24.908
	SCSOR	55	69.000	80.000	73.218	2.573
	WTIN	55	330.000	360.000	348.727	7.880
	NOSCO	55	70.000	75.000	72.582	1.197
	WFN	55	280.000	429.000	378.000	34.516
	WDSI	55	0.066	0.302	0.097	0.038

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

PRELIMINARY BREAD WHEAT YT (EXP.770)

C.O. QUALSET

DAVIS, CA

NURSCO 21

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
870756	((BK*BB)*MEXP)*YR	12	HWS	62.3	73.2	0.35	90.6	10.3	60.7	2M
870757	((BK*BB)*MEXP)*YR	<u>5/</u> 16	HRS	62.1	71.1	0.35	88.2	11.5	62.0	7M
870758	YECORA ROJO	20	HRS	63.1	71.1	0.37	87.1	11.2	61.8	8M
870759	((BK*BB)*MEP)*166R	22	HWS	63.5	68.9	0.35	86.3	12.6	61.3	8M
870760	((BK*BB)*MEP)*166R	23	HRS	62.8	69.7	0.43	82.7	10.3	62.6	8M
870761	((BK*BB)*MEP)*166R	<u>6/</u> 30	HRS	63.7	69.9	0.33	88.2	10.2	61.5	7M
870762	((BK*BB)*MEP)*166R	31	HRS	62.5	70.0	0.41	84.2	10.6	62.4	8M
870763	((MG168*((CHB65*CB479))*YR	38	HWS	62.8	69.4	0.40	84.2	9.7	64.0	7M
870764	((MG168*((CHB65*CB479))*166R	40	HWS	60.5	67.7	0.40	82.0	10.0	61.0	8M
870765	((MG168*((WTE*YALTA))*((IP*15))*	44	HRS	62.5	68.9	0.38	84.7	10.2	62.5	8M

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
870756	((BK*BB)*MEXP)*YR	12	HWS	59.7	60.4	1.7	880	923	8	P-MTIME&BCRGR
870757	((BK*BB)*MEXP)*YR	16	HRS	64.2	63.7	3.9	1010	979	2	
870758	YECORA ROJO	20	HRS	63.7	63.5	6.6	960	948	2	
870759	((BK*BB)*MEP)*166R	22	HWS	64.6	63.0	4.5	835	736	5	Q-FYELD, LVOL&BCRGR
870760	((BK*BB)*MEP)*166R	23	HRS	62.6	63.3	4.5	885	928	4	Q-FYELD&BCRGR
870761	((BK*BB)*MEP)*166R	30	HRS	62.4	63.2	3.9	880	930	4	Q-BCRGR
870762	((BK*BB)*MEP)*166R	31	HRS	63.7	64.1	5.1	755	780	6	P-LVOL&BCRGR
870763	((MG168*((CHB65*CB479))*YR	38	HWS	64.4	65.7	4.6	840	921	5	Q-BCRGR
870764	((MG168*((CHB65*CB479))*166R	40	HWS	61.7	62.7	4.8	770	832	6	P-FYELD, LVOL&BCRGR
870765	((MG168*((WTE*YALTA))*((IP*15))*	44	HRS	63.4	64.2	4.6	845	895	4	Q-FYELD, LVOL&BCRGR

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: IDNO 16 is excellent overall in quality. Despite fair protein and good dough mixing properties, most of the other selections had heavy bread crumb structure.

NURSCO 22

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
870766	MG168*(WTE*YALTA))*((IP**YR	6/2	HRS	62.7	69.7	0.35	86.8	10.2	61.4	8M
870767	MG168*(WTE*YALTA))*((IP**YR	3	HWS	60.7	68.6	0.37	84.7	11.0	61.9	8M
870768	MG168*(WTE*YALTA))*((IP**YR	4	HRS	61.7	67.5	0.35	84.6	10.8	59.9	8M
870769	(MG168*(WTE*YALTA))*((IP**YR	6/7	HWS	62.1	69.9	0.37	86.2	11.8	62.1	8M
870770	(MG168*(WTE*YALTA))*((IP**YR	5/10	HRS	64.0	72.1	0.30	92.0	12.8	63.1	5H
870771	(MG168*(WTE*YALTA))*((IP**YR	6/11	HRS	64.0	71.3	0.29	91.5	12.7	64.1	5H
870772	8156 B'A2*((YTA2*GB56)**YR	13	HWS	61.0	67.4	0.35	84.5	10.4	62.4	8M
870773	8156 B'A2*((YTA2*GB56)**YR	14	HRS	63.3	67.4	0.33	85.5	9.3	62.1	8M
870774	8156 B'A2*((YTA2*GB56)**YR	6/15	HWS	63.0	70.9	0.34	88.7	9.7	61.0	8M
870775	8156 B'A2*((YTA2*GB56)**YR	6/16	HWS	62.1	69.4	0.38	85.1	10.1	62.7	8M
870776	INIA S'*(YT54E*(Y50A2**YR	6/17	HWS	64.6	72.6	0.35	90.1	10.7	60.5	7M
870777	INIA S'*(YT54E*(Y50A2**YR	18	HRS	65.1	72.7	0.34	90.7	10.8	61.5	8M
870778	YECORA ROJO	20	HRS	63.8	70.6	0.35	87.6	10.5	61.2	8M
870779	INIA S'*(YT54E*(Y50A2**YR	6/22	HRS	63.2	72.1	0.35	89.4	11.3	62.8	5H
870780	INIA S'*(YT54E*(Y50A2**YR	5/24	HWS	64.6	74.3	0.35	91.7	11.5	60.3	8M
870781	INIA S'*(YT54E*(Y50A2**YR	27	HWS	63.0	69.7	0.34	87.6	11.0	62.2	8M
870782	INIA S'*(YT54E*(Y50A2**YR	28	HWS	62.2	70.8	0.34	88.3	11.6	61.7	5H
870783	INIA S'*(YT54E*(Y50A2**YR	5/29	HWS	63.0	70.2	0.34	87.8	11.1	62.4	5H
870784	((12300*TD0)*JAR66)**I66R	33	HRS	63.3	69.3	0.34	87.1	10.4	61.1	8M
870785	((12300*TD0)*JAR66)**I66R	34	HRS	63.6	67.5	0.37	83.3	10.2	63.1	8M
870786	((12300*TD0)*JAR66)**I66R	35	HRS	63.6	68.3	0.38	83.8	10.4	62.9	8M
870787	((12300*TD0)*JAR66)**I66R	5/36	HRS	64.5	70.0	0.34	87.6	10.9	62.5	8M
870788	((12300*TD0)*JAR66)**I66R	6/38	HRS	64.1	68.7	0.36	85.3	10.5	63.2	8M
870789	((12300*TD0)*JAR66)**I66R	39	HRS	64.4	70.3	0.33	88.5	10.7	62.0	8M
870790	((12300*TD0)*JAR66)**I66R	40	HWS	63.3	68.9	0.33	87.2	10.2	62.5	8M
870791	((12300*TD0)*JAR66)**I66R	6/41	HWS	63.5	69.1	0.34	86.9	10.1	60.9	8M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 22

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
870766	MG168*(WTE*YALTA))*((IP*-YR	2	HRS	62.3	63.1	4.7	875	925	3	3 Q-FYELD
870767	MG168*(WTE*YALTA))*((IP*-YR	3	HWS	63.6	63.6	4.5	950	950	3	Q-LVOL&BCRGR
870768	MG168*(WTE*YALTA))*((IP*-YR	4	HRS	61.4	61.6	4.1	810	822	2	
870769	MG168*(WTE*YALTA))*((IP*-YR	7	HWS	64.6	63.8	4.3	940	890	2	
870770	MG168*(WTE*YALTA))*((IP*-YR	10	HRS	66.6	64.8	4.8	955	843	2	
870771	MG168*(WTE*YALTA))*((IP*-YR	11	HRS	67.5	65.8	5.4	925	820	2	Q-LVOL
870772	8156 B'A2*((YTA2*GB56)*-YR	13	HWS	63.5	64.1	4.7	830	867	3	Low FYELD
870773	8156 B'A2*((YTA2*GB56)*-YR	14	HRS	62.1	63.8	4.5	815	920	6	Low FYELD, P-BCRGR
870774	8156 B'A2*((YTA2*GB56)*-YR	15	HWS	61.4	62.7	4.7	805	886	4	Q-BCRGR
870775	8156 B'A2*((YTA2*GB56)*-YR	16	HWS	63.5	64.4	5.4	870	926	4	"
870776	INIA'S'*(YT54E*(Y50A2*-YR	17	HWS	61.9	62.2	4.5	915	934	4	"
870777	INIA S'*(YT54E*(Y50A2*-YR	18	HRS	63.0	63.2	5.5	815	827	4	P-LVOL Q-BCRGR
870778	YECORA ROJO	20	HRS	62.4	62.9	6.8	830	861	3	
870779	INIA S'*(YT54E*(Y50A2*-YR	22	HRS	63.8	63.5	5.3	910	891	3	
870780	INIA S'*(YT54E*(Y50A2*-YR	24	HWS	62.5	62.0	5.1	975	944	3	
870781	INIA'S'*(YT54E*(Y50A2*-YR	27	HWS	62.9	62.9	4.4	885	885	6	P-BCRGR
870782	INIA S'*(YT54E*(Y50A2*-YR	28	HWS	63.0	62.4	4.5	875	838	4	Q-BCRGR
870783	INIA S'*(YT54E*(Y50A2*-YR	29	HWS	63.2	63.1	4.5	980	974	2	
870784	((12300*TD0)*JAR66)*-YR	33	HRS	62.2	62.8	4.5	900	937	4	Q-BCRGR
870785	((12300*TD0)*JAR66)*-YR	34	HRS	64.0	64.8	4.7	810	860	6	P-FYELD&BCRGR
870786	((12300*TD0)*JAR66)*-YR	35	HRS	63.0	63.6	5.2	830	867	6	P-FYELD&BCRGR
870787	((12300*TD0)*JAR66)*-YR	36	HRS	64.1	64.2	4.2	900	906	2	
870788	((12300*TD0)*JAR66)*-YR	38	HRS	64.4	64.9	4.0	855	886	3	Q-FYELD
870789	((12300*TD0)*JAR66)*-YR	39	HRS	63.4	63.7	4.3	815	834	6	Q-LVOL&BCRGR
870790	((12300*TD0)*JAR66)*-YR	40	HWS	62.4	63.2	5.2	770	820	5	"
870791	((12300*TD0)*JAR66)*-YR	41	HWS	61.7	62.6	5.5	880	936	3	

COMMENTS: Several of these selections (both red and white) have good overall quality characteristics that are equal or better than Yecora Rojo and are footnoted as promising. All had good strong dough mixing properties, but despite this they gave bread with a heavy crumb grain.

NURSCO 23

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
870792	YECORA ROJO	20	HRS	62.6	72.2	0.38	88.0	11.5	60.1	7H
870793	MR-26*JILGUERO	22	HWS	63.2	68.3	0.35	85.2	10.1	62.2	4H
870794	MR-26*JILGUERO	29	HWS	63.3	68.5	0.35	85.5	10.1	60.9	4H
870795	MR-26*JILGUERO	30	HWS	63.3	68.3	0.34	85.8	9.5	61.8	4H
870796	MR-26*JILGUERO	33	HWS	61.6	67.2	0.36	83.7	10.3	62.2	4H
870797	MR-26*JILGUERO	36	HWS	61.6	67.5	0.36	83.9	10.3	60.1	3H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
870792	YECORA ROJO	20	HRS	63.3	61.8	6.3	875	782	2	Q-FYELD&BCRGR
870793	MR-26*JILGUERO	22	HWS	64.0	63.9	2.9	860	854	4	"
870794	MR-26*JILGUERO	29	HWS	62.7	62.6	3.1	865	859	5	"
870795	MR-26*JILGUERO	30	HWS	63.0	63.5	3.6	830	861	6	"
870796	MR-26*JILGUERO	33	HWS	64.2	63.9	3.3	890	871	5	"
870797	MR-26*JILGUERO	36	HWS	65.1	64.8	2.9	855	836	6	"

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein.4/ Observed Values Corrected to 10% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS: All of these MR-26*JILGUERO selections were significantly lower in flour yield than Yecora Rojo. Their dough mixing and loaf volume properties were good, but the resultant bread crumb was poor.

NURSCO 24

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870798	ERA*ANZA	6/2	HRS	62.5	71.7	0.34	89.4	9.1	59.4	8M
870799	ERA*166R	12	HRS	62.3	69.5	0.36	85.9	10.3	61.0	7M
870800	YOLO	19	HRS	63.7	73.1	0.34	91.2	8.9	57.5	3M
870801	YECORA ROJO	20	HRS	63.2	71.1	0.35	88.4	11.0	60.2	8M
870802	ERA*TOBARI 66	25	HRS	62.0	70.0	0.39	85.3	10.1	58.1	6M
870803	ERA*TOBARI 66	6/27	HRS	62.7	71.8	0.36	88.4	10.0	61.0	5H
870804	ERA*TOBARI 66	32	HRS	61.0	70.1	0.37	86.3	9.4	58.4	6M
870805	COMBINADOR*TOBARI 66	40	HRS	61.7	70.1	0.37	86.4	11.0	59.7	8M
870806	COMBINADOR*TOBARI 66	45	HRS	63.3	70.8	0.35	88.1	9.9	58.5	6M

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
870798	ERA*ANZA	2	HRS	60.2	61.1	3.9	805	861	4 = to Yecora Rojo	
870799	ERA*166R	12	HRS	63.0	62.7	3.4	845	826	5 Q-BCRGR	
870800	YOLO	19	HRS	56.9	58.0	2.1	895	963	6 P-MTIME&BCRGR	
870801	YECORA ROJO	20	HRS	62.9	61.9	5.5	875	813	4	
870802	ERA*TOBARI 66	25	HRS	59.9	59.8	4.7	780	774	5 P-LVOL Q-BCRGR	
870803	ERA*TOBARI 66	27	HRS	62.7	62.7	4.4	840	840	4 = to Yecora Rojo	
870804	ERA*TOBARI 66	32	HRS	59.5	60.1	3.9	850	887	5 Q-BCRGR	
870805	COMBINADOR*TOBARI 66	40	HRS	62.4	61.4	4.6	795	733	6 Q-LVOL&BCRGR	
870806	COMBINADOR*TOBARI 66	45	HRS	60.1	60.2	3.9	825	831	5 Q-BCRGR	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: See "Remarks" for major deficiencies in baking performance. All were acceptable in flour milling properties.

NURSCO 25

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
870807	SOLAR*(TADORNA*INIA 66)	10	HRS	64.4	70.9	0.32	89.5	11.1	63.6	5H
870808	SOLAR*(CLEO*166)*ANZA	6/11	HRS	62.2	68.4	0.40	82.7	12.2	63.5	4H
870809	YOLO	15	HRS	62.4	71.5	0.38	87.0	10.3	61.4	4M
870810	TADORNA*INIA 66	16	HRS	63.5	71.1	0.43	84.3	10.7	61.3	4M
870811	YECORA ROJO	17	HRS	63.1	69.5	0.39	84.6	13.4	63.3	4H
870812	(TADORNA*INIA 66)*YECORA ROJO	6/18	HRS	61.7	69.6	0.41	83.8	11.4	61.5	8M
870813	(CLEO*INIA 66)*YECORA ROJO	6/20	HRS	64.4	69.9	0.35	87.1	10.6	62.3	6M
870814	(CLEO*INIA 66)*YECORA ROJO	21	HRS	64.0	68.0	0.35	85.3	10.8	65.2	8M
870815	(CLEO*INIA 66)*YECORA ROJO	22	HRS	64.4	67.3	0.33	85.6	11.8	63.7	4H
870816	(TADORNA*INIA 66)*YECORA ROJO	23	HRS	62.6	68.4	0.35	85.3	10.3	64.4	8M
870817	(TADORNA*INIA 66, UC544)*YR	6/26	HRS	62.1	69.3	0.36	86.0	10.4	62.6	4H
870818	(TADORNA*INIA 66, UC544)*YR	6/27	HRS	63.7	69.8	0.34	87.4	12.5	63.8	4H
870819	(TADORNA*INIA 66, UC546)*YR	6/29	HRS	63.4	70.5	0.36	87.4	12.6	62.6	5H
870820	(CLEO*2A166)*YR * (YR S'(R)	5/34	HRS	63.2	70.3	0.37	86.6	10.9	63.6	4H
870821	(VEERY S'*PROBRAND 771)*TAD*166	38	HRS	63.1	68.9	0.36	85.7	11.6	63.1	4H
870822	(JILGUERO S'*166R)*PROB 771*TAD	6/39	HRS	63.4	70.9	0.39	85.9	10.9	64.0	5H
870823	((ANZA*GAINES)*CAL)*PBD 771	40	HRS	61.4	65.6	0.37	81.7	11.6	63.3	5H
870824	(YR S'(R)*MEXIFEN)*PROB 771 * (CL	6/43	HRS	63.1	70.5	0.38	86.2	10.7	64.3	5H
870825	(NUDIF TP250*1)*ANZA *YR	46	HRS	62.0	66.6	0.38	81.9	13.0	62.4	3H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 25

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
870807	SOLAR*(TADORNA*INIA 66)	10	HRS	65.4	65.3	5.7	830	824	6	Q-LVOL&BCRGR
870808	SOLAR*(CLEO*166)*ANZA	11	HRS	66.4	65.2	3.6	960	886	3	Q-FYELD
870809	YOLO	15	HRS	62.4	63.1	2.2	900	943	6	P-MTIME&BCRGR
870810	TADORNA*INIA 66	16	HRS	62.7	63.0	2.1	800	819	8	P- "
870811	YECORA ROJO	17	HRS	67.4	65.0	4.4	1035	886	3	"
870812	(TADORNA*INIA 66)*YECORA ROJO	18	HRS	63.6	63.2	4.8	915	890	3	Q-BCRGR
870813	(CLEO*INIA 66)*YECORA ROJO	20	HRS	63.6	64.0	2.9	890	915	4	P-FYELD, LVOL&BCRGR
870814	(CLEO*INIA 66)*YECORA ROJO	21	HRS	66.7	66.9	4.2	735	747	6	Q-BCRGR&LVOL
870815	(CLEO*INIA 66)*YECORA ROJO	22	HRS	66.2	65.4	3.7	880	830	5	Q- "
870816	(TADORNA*INIA 66)*YECORA ROJO	23	HRS	65.4	66.1	5.6	790	833	5	"
870817	(TADORNA*INIA 66, UC544)*YR	26	HRS	63.7	64.3	3.0	875	912	4	Q-BCRGR
870818	(TADORNA*INIA 66, UC544)*YR	27	HRS	67.0	65.5	3.6	955	862	3	Q- "
870819	(TADORNA*INIA 66, UC546)*YR	29	HRS	65.9	64.3	4.1	980	881	3	"
870820	(CLEO*2A166)*YR * (YR S'(R)	34	HRS	64.2	64.3	3.3	995	1001	2	Q-FYELD&LVOL
870821	(VEERY S'*PROBRAND 771)*TAD*166	38	HRS	65.4	64.8	3.2	900	863	3	"
870822	(JILGUERO S'*166R)*PROB 771**TAD	39	HRS	65.6	65.7	4.1	885	891	3	"
870823	((ANZA*GAINES)*CAL)*PBD 771	40	HRS	65.6	65.0	5.2	970	933	2	P-FYELD
870824	(YR S'(R))*MEXIFEN)*PROB 771 *(CL	43	HRS	65.7	66.0	4.8	890	909	3	"
870825	(NUDIF TP250*1)*ANZA *YR	46	HRS	66.1	64.1	2.8	925	801	4	P-FYELD

COMMENTS: Several of these selections (footnoted) are equal to or better than Yecora Rojo. Selection No. 34 is significantly better than all others in overall quality.

NURSCO 26

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
870826	(C113232*R50)*ANZA UC 295*YR	1	HRS	62.1	71.7	0.37	87.7	10.2	62.7	6M
870827	(C113232*R50)*ANZA UC 295*VEERYS	2	HRS	64.7	72.1	0.39	87.3	10.3	62.1	6M
870828	(C113232*R50)*ANZA UC 295*VEERYS	6/3	HWS	64.7	72.5	0.43	85.6	10.2	62.1	8M
870829	(C113232*R50)*ANZA UC 295*VEERYS	6/6	HRS	64.7	72.4	0.37	88.5	9.6	61.9	7M
870830	MAGPIE S'*CONDOR S'	6/7	HRS	63.5	69.4	0.38	85.1	9.1	62.3	4M
870831	((N066-BB/CN0*NAD-CHR S')7C)*YR70	9	HWS	62.9	69.4	0.39	84.7	10.2	63.5	8M
870832	((N066-BB/CN0*NAD-CHR S')7C)*YR70	10	HWS	62.8	68.4	0.39	83.5	9.4	64.8	8M
870833	((N066-BB/CN0*NAD-CHR S')7C)*YR70	6/12	HWS	63.5	69.4	0.38	85.1	9.1	62.1	8M
870834	((N066-BB/CN0*NAD-CHR S')7C)*YR70	13	HWS	62.6	68.9	0.37	84.8	10.2	63.5	8M
870835	((N066-BB/CN0*NAD-CHR S')7C)*YR70	14	HWS	61.8	68.4	0.40	83.1	9.8	63.0	8M
870836	TORIM73*(CN0 S'-7C*CN0-INA/T)	16	HWS	64.8	70.9	0.35	88.2	9.9	62.8	8M
870837	TORIM73*(CN0 S'-7C*CN0-INA/T)	17	HWS	65.0	71.2	0.34	89.1	10.3	62.0	8M
870838	(TOBA7C)*TORIM73	5/18	HRS	63.8	71.3	0.38	86.7	10.5	62.8	7H
870839	(TOBA7C)*TORIM73	6/19	HRS	63.9	69.3	0.37	85.4	10.6	63.1	6H
870840	MAGPIE S'*KAL-BB	6/24	HWS	62.5	69.1	0.43	82.2	9.5	63.9	5H
870841	COCORAQUE75*((RR68-WW15/GJ S7	25	HRS	63.7	71.0	0.37	87.3	9.7	61.3	7M
870842	COCORAQUE75*((RR68-WW15/GJ S7	26	HWS	63.6	70.8	0.35	88.0	9.7	61.8	7M
870843	(INIA S'*ON)*(INIA*BB) *JUP73	28	HWS	64.4	70.1	0.36	87.0	10.4	62.1	8M
870844	BOS S'*(RON&CHA)*(BB*NOR67)	6/31	HWS	63.0	69.1	0.38	84.8	9.3	63.4	8M
870845	CJ71*JUSTIN	36	HRS	62.0	69.4	0.34	87.2	10.1	61.1	6M
870846	CJ71*JUSTIN	37	HRS	62.3	69.2	0.34	87.1	9.6	62.9	7M
870847	(CN0 S'*INIA S')*JUSTIN	6/42	HRS	61.2	69.7	0.38	85.5	10.1	59.9	8M
870848	((TZPP*WTE)A3*NP63)*(I*(SON 64	46	HRS	64.0	70.7	0.36	87.4	10.0	61.3	7M
870849	((TZPP*WTE)A3*NP63)*(I*(SON 64	47	HRS	63.1	68.5	0.37	84.8	9.2	60.9	7M
870850	YOLO	48	HRS	63.9	71.5	0.34	89.1	9.3	60.4	4M
870851	YECORA ROJO	49	HRS	63.2	69.5	0.35	86.8	10.7	61.8	6H
870852	PUSA*ETOILE,DECHOISY	6/51	HWS	63.7	70.7	0.35	87.7	11.0	63.8	6H
870853	BT*SR30WST	52	HWS	63.4	68.8	0.36	85.2	10.3	63.0	6H
870854	TC6*DEMOCRAT	6/54	HRS	64.6	70.1	0.31	89.3	10.5	62.0	6M
870855	TC6*ANVIERSARIO	6/55	HWS	64.6	71.8	0.33	89.9	10.6	62.6	7M
870856	TAICHUNG*TESTIGO	56	HRS	63.2	68.5	0.41	82.6	11.8	62.2	5H
870857	CHUKAR S'	57	HWS	64.6	67.2	0.41	81.2	11.3	62.9	4H
870858	KAL/BB//TQFN S'	60	HRS	65.2	69.1	0.33	87.4	11.4	62.8	5H

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein.

NURSCO 26

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
870826	(C113232*R50)*ANZA UC 295*YR	1	HRS	64.6	64.4	3.0	880	868	4Q-LVOL&BCRGR	
870827	(C113232*R50)*ANZA UC 295*VEERYS	2	HRS	64.1	63.8	2.8	805	786	5P-LVOL&BCRGR	
870828	(C113232*R50)*ANZA UC 295*VEERYS	3	HWS	64.0	63.8	4.4	935	923	3	
870829	(C113232*R50)*ANZA UC 295*VEERYS	6	HRS	63.2	63.6	4.2	900	925	4Q-BCRGR	
870830	MAGPIE S'*CONDOR S'	7	HRS	63.1	64.0	3.3	930	986	4Q-	
870831	((N066-BB/CN0*NAD-CHR S')7C)*YR70	9	HWS	65.4	65.2	6.0	900	888	4Q-LVOL&BCRGR	
870832	((N066-BB/CN0*NAD-CHR S')7C)*YR70	10	HWS	65.9	66.5	6.4	810	847	6P-LVOL&BCRGR	
870833	((N066-BB/CN0*NAD-CHR S')7C)*YR70	12	HWS	62.9	63.8	5.3	845	901	4Q-BCRGR	
870834	((N066-BB/CN0*NAD-CHR S')7C)*YR70	13	HWS	65.4	65.2	6.5	885	873	5Q-LVOL&BCRGR	
870835	((N066-BB/CN0*NAD-CHR S')7C)*YR70	14	HWS	64.5	64.7	7.2	845	857	2P-FYELD	
870836	TORIM73*(CN0 S'-7C*CN0-INA/T)	16	HWS	64.4	64.5	5.2	865	871	4Q-MTIME&BCRGR	
870837	TORIM73*(CN0 S'-7C*CN0-INA/T)	17	HWS	64.0	63.7	4.3	880	861	3Q-LVOL&BCRGR	
870838	(TOBA7C)*TORIM73	18	HRS	65.0	64.5	6.7	1000	969	2	
870839	(TOBA7C)*TORIM73	19	HRS	65.4	64.8	5.6	960	923	4Q-BCRGR	
870840	MAGPIE S'*KAL-BB	24	HWS	65.1	65.6	4.2	895	926	2Q-FASH	
870841	COCORAQUE75*(RR68-WM15/GJ S7	25	HRS	62.7	63.0	4.0	875	894	4Q-LVOL&BCRGR	
870842	COCORAQUE75*(RR68-WM15/GJ S7	26	HRS	63.2	63.5	3.2	875	894	4Q-	
870843	(INIA S'*(ON&CHA)*((NP63)*((SON 64	28	HWS	64.2	63.8	4.1	855	830	6P-LVOL&BCRGR	
870844	BOS S'*(ON&CHA)*((NP63)*((SON 64	31	HWS	64.4	65.1	4.6	835	878	2Q-LVOL	
870845	CJ71*JUSTIN	36	HRS	62.9	62.8	3.5	855	849	3P-LVOL Q-BCRGR	
870846	CJ71*JUSTIN	37	HRS	64.2	64.6	3.9	855	880	4Q-LVOL&BCRGR	
870847	(CN0 S'*(INIA S')*JUSTIN	42	HRS	61.7	61.6	4.3	925	919	2	
870848	((TZPP*WTE)A3*NP63)*((SON 64	46	HRS	63.0	63.0	3.9	880	880	3Q-LVOL	
870849	((TZPP*WTE)A3*NP63)*((SON 64	47	HRS	61.8	62.6	4.1	875	925	4Q-FYELD&BCRGR	
870850	YOLO	48	HRS	61.4	62.1	2.5	895	938	5Q-BCRGR	
870851	YECORA ROJO	49	HRS	64.2	63.5	5.6	945	902	3	
870852	PUSA*ETOILE, DECHOISY	51	HWS	66.5	65.5	5.4	975	913	3Q-FYELD&LVOL	
870853	BT*SR30WST	52	HWS	65.0	64.7	5.0	885	866	3	
870854	TC6*DEMOCRAT	54	HRS	64.2	63.7	3.5	940	909	2	
870855	TC6*ANVIERSARIO	55	HWS	63.9	63.3	4.0	905	868	2Q-LVOL	
870856	TAICHUNG*TESTIGO	56	HRS	65.7	63.9	3.9	930	818	5P-FYELD, LVOL&BCRGR	
870857	CHUKAR S'	57	HWS	65.9	64.6	3.3	915	834	2P-FYELD&LVOL	
870858	KAL/BB//TQFN S'	60	HRS	65.9	64.5	4.5	900	813	2P-LVOL	

COMMENTS: Several of these selections, both red and white, are equal to or better than Yecora Rojo in overall quality (footnoted). See "Remarks" for major deficiencies.

NURSCO 27

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
870859	IRRAD INIA 66, 1200NF	1	HRS	63.5	69.8	0.34	87.7	11.7	62.7	5H
870860	IRRAD INIA 66, 600NF	4	HRS	64.5	68.7	0.35	85.8	11.0	61.7	7H
870861	INIA 66	5	HRS	65.0	72.6	0.34	90.3	10.2	61.6	4M
870862	IRRAD INIA 66, 900NF	6	HRS	64.6	69.4	0.59	74.1	11.5	60.7	5H
870863	IRRAD INIA 66, 1200NF	6/8	HRS	65.6	70.5	0.31	89.6	11.2	63.0	5H
870864	IRRAD INIA 66, 1200NF	9	HWS	62.5	67.4	0.38	83.1	10.4	61.8	6M
870865	ANZA	10	HRS	64.2	70.9	0.33	89.2	9.2	60.7	4M
870866	IRAD INIA 66, 600NF	12	HRS	65.6	68.6	0.30	88.1	11.4	62.3	7M
870867	IRAD INIA 66, 600NF	13	HRS	63.5	70.0	0.39	85.3	11.4	63.1	5H
870868	IRAD INIA 66, 600NF	6/14	HRS	65.7	69.6	0.30	89.4	11.3	61.9	8M
870869	YECORA ROJO	6/15	HRS	63.5	70.8	0.35	88.1	10.8	62.6	7H
870870	IRRAD INIA 66, 600NF	17	HRS	65.1	68.9	0.29	89.0	11.4	62.6	5H
870871	IRRAD INIA 66, 600NF	23	HRS	65.1	70.3	0.36	87.1	11.3	64.4	6H
870872	IRRAD INIA 66, 600NF	5/27	HRS	65.1	71.0	0.33	89.4	11.1	62.3	8M
870873	IRRAD INIA 66, 600NF	29	HRS	65.4	71.3	0.30	91.4	11.2	63.3	8M
870874	SHASTA	30	HRS	64.9	71.5	0.35	88.6	10.5	60.7	6M
870875	INIA NF600-7-3*INIA 66	6/31	HRS	65.7	71.1	0.30	90.8	11.0	62.4	8M
870876	INIA NF600-7-3*INIA 66	6/32	HRS	65.3	70.7	0.30	90.4	11.1	62.4	8M
870877	INIA NF600-7-3*INIA 66	36	HRS	65.4	70.8	0.29	91.0	11.1	62.9	6H
870878	INIA NF600-7-3*INIA 66	6/37	HRS	65.6	70.0	0.30	89.9	11.2	62.0	5H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 27

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
870859	IRRAD INIA 66, 1200NF	1	HRS	65.1	64.4	3.9	925	882	4	Q-BCRGR
870860	IRRAD INIA 66, 600NF	4	HRS	63.4	63.4	5.6	895	895	5	Q-FYELD&BCRGR
870861	INIA 66	5	HRS	61.5	62.3	2.2	810	864	4	Q-BCRGR
870862	IRRAD INIA 66, 900NF	6	HRS	62.9	62.4	3.6	890	859	4	Q-BCRGR
870863	IRRAD INIA 66, 1200NF	8	HRS	64.9	64.7	4.0	910	898	3	
870864	IRRAD INIA 66, 1200NF	9	HWS	62.9	63.5	3.4	900	937	4	Q-FYELD&BCRGR
870865	ANZA	10	HRS	60.6	62.4	2.4	790	900	8	VP-BCRGR
870866	IRAD INIA 66, 600NF	12	HRS	64.4	64.0	4.0	875	850	4	Q-FYELD&BCRGR
870867	IRAD INIA 66, 600NF	13	HRS	65.2	64.8	3.3	905	880	4	Q-BCRGR
870868	IRAD INIA 66, 600NF	14	HRS	63.9	63.6	4.0	915	896	3	
870869	YECORA ROJO	15	HRS	64.1	64.3	5.7	880	892	2	
870870	IRRAD INIA 66, 600NF	17	HRS	64.7	64.3	4.3	925	900	4	Q-BCRGR
870871	IRRAD INIA 66, 600NF	23	HRS	66.4	66.1	4.8	835	816	4	P-LVOL Q-BCRGR
870872	IRRAD INIA 66, 600NF	27	HRS	64.1	64.0	4.0	910	904	2	
870873	IRRAD INIA 66, 600NF	29	HRS	65.2	65.0	4.2	900	888	4	Q-BCRGR
870874	SHASTA	30	HRS	61.9	62.4	2.9	810	841	6	P-LVOL&BCRGR
870875	INIA NF600-7-3*INIA 66	31	HRS	64.1	64.1	4.3	895	895	3	
870876	INIA NF600-7-3*INIA 66	32	HRS	64.2	64.1	3.9	870	864	3	
870877	INIA NF600-7-3*INIA 66	36	HRS	64.7	64.6	4.3	915	909	4	Q-BCRGR
870878	INIA NF600-7-3*INIA 66	37	HRS	63.9	63.7	3.7	960	948	3	

NURSCO 28

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
870879	TADORNA*INIA66	5	HRS	63.0	69.7	0.50	79.2	11.0	60.8	4M
870880	TADORNA*INIA66	16	HRS	63.3	70.6	0.37	86.5	10.5	60.9	4M
870881	UC489	6/24	HRS	63.7	69.2	0.36	85.9	11.0	62.4	2H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
870879	TADORNA*INIA66	5	HRS	62.5	62.5	2.1	785	785	6	P-Milling, BCRGR&MTIME
870880	TADORNA*INIA66	16	HRS	62.1	62.6	2.3	725	756	9	P-MTIME, LVOL&BCRGR
870881	UC489	24	HRS	64.1	64.1	2.4	840	840	4	Q-BCRGR

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 11% Protein.4/ Observed Values Corrected to 11% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS: UC489 may be acceptable in overall quality, but with no check variety for comparison it is a questionable judgement.

NURSCO 29

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870882	(BB S**ANZA)*YR	5/2	HRS	61.8	71.2	0.36	87.8	10.7	61.2	7H
870883	(BB S *ANZA)*YR	6/3	HRS	61.5	69.1	0.40	83.7	11.2	62.5	7H
870884	((C113232*R50)*YR	22	HRS	64.7	68.8	0.39	83.7	8.9	62.3	8M
870885	YECORA ROJO	23	HRS	63.6	69.5	0.36	86.0	10.5	61.2	8M
870886	YOLO	24	HRS	64.2	73.1	0.34	90.9	8.8	59.7	3M
870887	SWN4275	29	HWS	64.7	66.2	0.32	84.6	10.2	63.0	8M
870888	((SC66*PI90982)*I66**YR	36	HRS	64.8	71.1	0.33	89.2	11.2	62.7	5H
870889	(JUSTIN*SC66)*YR	38	HWS	65.0	65.9	0.38	81.4	10.1	60.9	8M
870890	(JUSTIN*SC66)*YR	41	HRS	63.0	69.4	0.32	88.3	10.3	60.7	6M
870891	(HUELQUEN*I66R)*YR	42	HRS	64.9	68.3	0.34	85.8	9.2	61.1	8M
870892	(HUELQUEN*I66R)*YR	45	HRS	64.0	70.8	0.37	87.0	10.4	63.0	8M

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein.

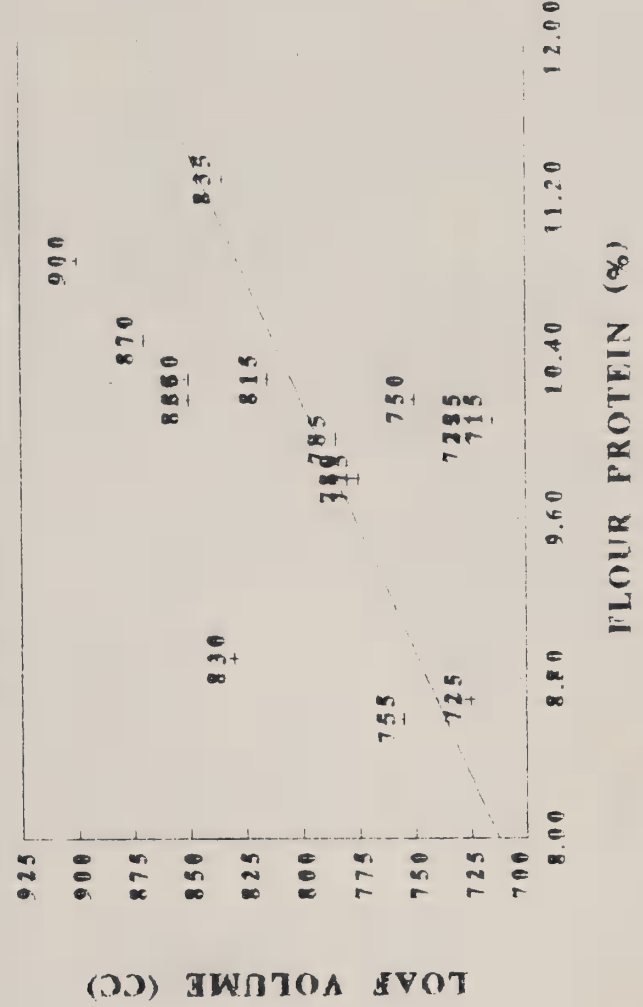
NURSCO 30

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWI	FYELD	FASH	MSCOR	FPROT	MABSC	MIYPE
						1/		1/	3/	
870893	((CNO*PJ62))*((POLK*(CNO*-ANZA	7	HRS	63.9	72.5	0.36	89.2	10.3	61.2	8M
870894	((CNO*PJ62))*((POLK*(CNO*CHR))-YR	6/8	HRS	65.5	71.2	0.36	87.7	10.2	61.7	8M
870895	((CNO*PJ62))*((POLK*(CNO*CHR))-YR	6/9	HRS	65.2	72.3	0.36	88.8	10.3	63.2	8M
870896	((CNO*PJ62))*((POLK*(CNO*CHR))-YR	10	HRS	63.6	70.8	0.36	87.6	9.8	62.0	8M
870897	((CNO*PJ62))*((POLK*(CNO*CHR))-YR	12	HRS	64.1	71.8	0.36	88.4	10.1	60.4	8M
870898	((CNO*PJ62))*((POLK*(CNO*CH-166R	14	HRS	65.5	69.2	0.36	86.0	10.0	61.8	7M
870899	((CNO*PJ62))*((POLK*(CNO*CH-166R	16	HRS	64.1	71.7	0.35	89.0	9.8	61.1	8M
870900	((RFNA2*908))*((CFN*1150-72)-ANZA	6/17	HRS	64.5	71.4	0.37	87.7	10.2	61.6	8M
870901	YOLO	19	HRS	64.3	72.3	0.35	89.6	8.9	59.6	4M
870902	YECORA ROJO	20	HRS	63.7	69.2	0.35	86.5	10.9	62.1	5H
870903	((RFNA2:908))*((CFN*1150-72))*-YR	23	HRS	64.8	70.8	0.35	87.8	11.3	61.1	4H
870904	((RFNA2:908))*((CFN*1150-72))*-YR	6/24	HRS	64.4	69.5	0.34	87.1	10.5	62.4	8M
870905	((RFNA2:908))*((CFN*1150-72))*-YR	25	HRS	65.1	72.0	0.35	89.2	10.0	59.7	6M
870906	((RFNA2:908))*((CFN*1150-72))*-YR	28	HRS	62.6	68.3	0.40	82.6	10.1	61.7	8M
870907	((RFNA2:908))*((CFN*1150-72))*-YR	31	HRS	63.0	69.7	0.37	86.0	10.2	59.7	8M
870908	(MEXICANI 1481*2ABB)*YR	42	HWS	62.9	68.4	0.40	83.0	10.0	61.2	8M
870909	DIEGO	44	HWS	63.8	67.4	0.37	83.2	8.7	64.0	6M
870910	PERICO	45	HWS	63.6	67.3	0.37	83.3	8.6	63.6	6M

- 1/ Observed Values Corrected to 14% Moisture Basis.
- 3/ Absorption at 14% Moisture Corrected to 10% Protein.
- 4/ Observed Values Corrected to 10% Protein.
- 5/ Particularly Promising Overall Quality Characteristics.
- 6/ Promising Overall Quality Characteristics.



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DAVIS, CA

NURSCO 30

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
870893	((CNO*PJ62)*(POLK*(CNO*-ANZA	7	HRS	63.2	62.9	4.1	850	831	5 Q-BCRGR	
870894	((CNO*PJ62)*(POLK*(CNO*CHR))-YR	8	HRS	63.6	63.4	4.4	850	838	4 Q-LVOL	
870895	((CNO*PJ62)*(POLK*(CNO*CHR))-YR	9	HRS	65.2	64.9	4.4	815	796	2 P-BCRGR	
870896	((CNO*PJ62)*(POLK*(CNO*CHR))-YR	10	HRS	63.5	63.7	5.5	780	792	6 Q-BCRGR&LVOL	
870897	((CNO*PJ62)*(POLK*(CNO*CHR))-YR	12	HRS	62.2	62.1	4.3	725	719	5 Q-BCRGR&LVOL	
870898	((CNO*PJ62)*(POLK*(CNO*CH-166R	14	HRS	63.5	63.5	3.6	725	725	5 Q-BCRGR&LVOL	
870899	((CNO*PJ62)*(POLK*(CNO*CH-166R	16	HRS	62.6	62.8	4.4	775	787	6 P-BCRGR Q-LVOL	
870900	((RFNA2:908)*(CFN*150-72)-ANZA	17	HRS	63.5	63.3	4.5	850	838	2 P-BCRGR	
870901	YOLC	19	HRS	60.2	61.3	3.6	830	898	8 P-BCRGR	
870902	YECORA ROJO	20	HRS	64.7	63.8	5.6	900	844	3	
870903	((RFNA2:908)*(CFN*150-72))*-YR	23	HRS	64.1	62.8	4.1	835	754	4 Q-BCRGR&LVOL	
870904	((RFNA2:908)*(CFN*150-72))*-YR	24	HRS	64.6	64.1	4.6	870	839	3	
870905	((RFNA2:908)*(CFN*150-72))*-YR	25	HRS	61.4	61.4	3.4	725	725	5 Q-BCRGR	
870906	((RFNA2:908)*(CFN*150-72))*-YR	28	HRS	63.5	63.4	5.4	715	709	6 P-BCRGR	
870907	((RFNA2:908)*(CFN*150-72))*-YR	31	HRS	61.6	61.4	4.6	750	738	6 P-BCRGR	
870908	(MEXICANI 1481*2ABB)*YR	42	HWS	62.9	62.9	5.0	785	785	4 Q-FYELD&BCRGR	
870909	DIEGO	44	HWS	64.4	65.7	3.0	725	806	8 P-FYELD&BCRGR	
870910	PERICO	45	HWS	63.9	65.3	3.3	755	842	8 P-FYELD&BCRGR	

COMMENTS: Dough mixing times of the group are longer than normal based upon 3.6 min. for Yolo. Largest deficiency was poor bread crumb structure and some problems with loaf volume (see plot on page 1). Correlation of the loaf volume to protein was .46, indicating a wide range in quality.

NURSCO 32

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
870939	BEZOSTAYA*166, RANDOM BULK	2	HRS	64.1	72.5	0.34	90.5	10.3	61.5	4M
870940	(((INIA*CN0)*CALIDAD)*ANZA	5	HRS	64.7	70.9	0.34	88.6	10.4	62.1	4M
870941	(((BC60*CI13232)*166)*ANZA	6	HRS	65.7	70.6	0.34	88.4	10.0	56.8	2M
870942	JILQUERO'S A ANZA	9	HRS	64.3	70.0	0.34	87.8	10.1	60.8	6M
870943	TZPP*A ANZA2	12	HRS	64.6	73.3	0.36	90.3	10.7	59.8	3M
870944	TZPP*2A ANZA	18	HRS	64.5	71.3	0.34	89.2	10.3	59.9	4M
870945	TZPP*2A ANZA	19	HRS	64.7	71.9	0.33	90.3	10.6	60.4	4M
870946	(DIBO*MFLO)*ANZA	22	HRS	63.7	69.6	0.33	88.0	8.9	58.8	2M
870947	SHASTA*YECORA ROJO	6/ 23	HRS	63.0	70.1	0.37	86.5	10.1	57.8	7M
870948	SHASTA*YECORA ROJO	24	HRS	63.1	68.7	0.35	86.0	10.0	58.3	4M
870949	((((INIA*CN0)*CALIDAD)*ANZA**	25	HRS	65.1	69.4	0.36	86.3	8.8	57.6	2M
870950	((((INIA*CN0)*CALIDAD)*ANZA **	26	HRS	64.9	66.8	0.35	83.9	9.3	58.2	2M
870951	((((INIA*CN0)*CALIDAD)*ANZA *	27	HRS	65.1	69.2	0.37	85.3	9.0	56.8	2M
870952	((((INIA*CN0)*CAL)*ANZA KURT*A	28	HRS	65.2	68.4	0.35	85.3	9.2	58.0	3M
870953	((((INIA*CN0)*CAL)*ANZA KURT*A	29	HRS	65.4	69.7	0.35	87.0	8.9	58.4	3M
870954	(D6802*2A166)*SHASTA	30	HRS	65.4	69.3	0.35	86.3	10.1	58.2	6M
870955	SHASTA*CORCORQUE F75	31	HRS	65.2	71.3	0.34	89.2	9.8	58.5	4M
870956	(W31A4*TRANSEC)*ANZA	6/ 33	HRS	64.4	68.6	0.34	86.5	9.6	59.2	7M
870957	(BB S' *ANZA), UC291*Y.R.	34	HRS	63.9	69.9	0.37	86.1	10.2	59.5	4H
870958	(BB S' *ANZA), UC291*Y.R.	35	HRS	63.8	68.6	0.36	85.1	9.7	59.5	7M
870959	(BB S' *ANZA), UC291*Y.R.	6/ 37	HRS	63.1	68.9	0.35	85.9	10.2	59.6	7M
870960	YOLO S* YR	38	HRS	63.7	70.6	0.36	87.3	9.7	60.8	7M
870961	(((CI13232*RS0)*ANZA", UC355XVEE	40	HWS	64.1	68.9	0.35	86.0	9.6	57.9	2M
870962	(((I-CNO*CAL)*ANZA", UC446*YR	6/ 41	HRS	62.7	70.2	0.35	87.4	9.8	61.2	6M
870963	YOLO	43	HRS	64.4	72.8	0.35	90.4	8.9	58.5	2M
870964	YECORA ROJO	47	HRS	64.0	71.8	0.36	88.4	10.6	61.2	8M
870965	S108	48	HRS	64.4	72.3	0.35	89.4	10.9	59.0	2M
870966	S149	49	HRS	63.0	70.4	0.33	88.5	8.8	59.6	2M
870967	ANZA/S149	50	HRS	63.5	72.3	0.33	90.7	9.2	58.0	2M
870968	S149	51	HRS	63.2	70.2	0.36	87.0	10.6	50.3	2M
870969	VEERY#8, UC704	55	HRS	64.2	69.3	0.35	86.5	9.6	58.2	3M
870970	(((KUZ*BUHO" S7)* (KAL*BB)	56	HRS	64.1	70.0	0.34	87.7	10.0	58.8	4M
870971	(((KUZ*BUHO S7)* (KAL*BB)	59	HRS	64.2	69.0	0.35	86.3	10.0	58.4	4M
870972	MN7357	6/ 60	HRS	63.3	72.1	0.34	89.8	9.9	60.4	6M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 32

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
870939	BEZOSTAYA*166, RANDOM BULK	2	HRS	63.5	63.2	2.9	860	841	6 P-BCRGR	
870940	(((INIA*CNO)*CALIDAD)*ANZA	5	HRS	63.2	62.8	2.6	890	865	5 Q-BCRGR	
870941	(((BC60*C113232)*166)*ANZA	6	HRS	57.5	57.5	1.9	625	625	9 P-MTIME, LVOL&BCRGR	
870942	JILQUERO'S A ANZA	9	HRS	62.1	62.0	2.5	810	804	4 Q-MTIME&BCRGR	
870943	TZPP*A ANZA2	12	HRS	62.2	61.5	2.1	985	942	4 Q- " "	
870944	TZPP*2A ANZA	18	HRS	60.9	60.6	2.5	855	836	6 Q- " "	
870945	TZPP*2A ANZA	19	HRS	61.7	61.1	2.5	820	783	6 Q- " "	
870946	(DIBO*MFLO)*ANZA	22	HRS	57.4	58.5	1.4	655	723	9 P-MTIME, LVOL&BCRGR	
870947	SHASTA*YECORA ROJO	23	HRS	59.6	59.5	3.9	835	829	4 Q-BCRGR	
870948	SHASTA*YECORA ROJO	24	HRS	60.0	60.0	3.7	860	860	5 Q- " "	
870949	(((INIA*CNO)*CALIDAD)*ANZA	25	HRS	58.1	59.3	2.1	780	854	8 P- " "	
870950	(((INIA*CNO)*CALIDAD)*ANZA	26	HRS	59.2	59.9	2.3	785	828	8 P-BCRGR&FYELD	
870951	(((INIA*CNO)*CALIDAD)*ANZA	27	HRS	57.0	58.0	2.0	710	772	9 P- " "	
870952	(((INIA*CNO)*CAL)*ANZA KURT*A	28	HRS	58.4	59.2	2.1	795	845	8 P- " "	
870953	(((INIA*CNO)*CAL)*ANZA KURT*A	29	HRS	59.0	60.1	2.1	800	868	9 P- " "	
870954	(D6802*2A166)*SHASTA	30	HRS	60.0	59.9	3.2	855	849	8 P- " "	
870955	SHASTA*CORCORQUE F75	31	HRS	60.0	60.2	3.0	725	737	9 P- " "	
870956	(W31A4*TRANSEC)*ANZA	33	HRS	60.5	60.9	3.3	905	930	4 Q- " "	
870957	(BB S' *ANZA), UC291*Y.R.	34	HRS	61.4	61.2	3.7	915	903	6 P- " "	
870958	(BB S' *ANZA), UC291*Y.R.	35	HRS	60.9	61.2	3.9	865	884	6 P- " "	
870959	(BB S' *ANZA), UC291*Y.R.	37	HRS	61.5	61.3	3.9	875	863	4 Q- " "	
870960	YOLO S* YR	38	HRS	62.2	62.5	4.1	900	919	5 Q- " "	
870961	(((C113232*RS0)*ANZA), UC355XVEE	40	HWS	59.2	59.6	1.8	700	725	9 P-MTIME, LVOL&BCRGR	
870962	(((CNO*CAL)*ANZA), UC446*YR	41	HRS	62.7	62.9	3.1	855	867	5 Q-BCRGR	
870963	YOLO	43	HRS	59.1	60.2	1.9	870	938	8	
870964	YECORA ROJO	47	HRS	63.5	62.9	5.9	825	788	3	
870965	S108	48	HRS	61.6	60.7	1.7	810	754	8 P-MTIME, LVOL&BCRGR	
870966	S149	49	HRS	60.1	61.3	1.9	770	844	9 P- " "	
870967	ANZA/S149	50	HRS	58.9	59.7	1.7	780	830	9 P- " "	
870968	S149	51	HRS	52.6	52.0	1.8	650	613	9 P- " "	
870969	VEERY#8, UC704	55	HRS	59.5	59.9	2.9	735	760	8 P-BCRGR	
870970	(((KUZ*BUHO*57)* (KAL*BB)	56	HRS	60.5	60.5	2.8	765	765	8 P-BCRGR	
870971	(((KUZ*BUHO S7)* (KAL*BB)	59	HRS	60.1	60.1	2.5	805	805	8 P- " "	
870972	MN7357	60	HRS	62.0	62.1	3.3	860	866	4 Q- " "	

COMMENTS: The two check varieties, Yolo and Yecora Rojo (#43 & 47) are abnormal to their expected baking performance. Yolo is much higher in loaf volume, while Yecora Rojo is lower than expected. As a group these selections are characterized by short mixing time and heavy bread crumb structure (See "Remarks").

NURSCO 33

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
870973	NURI'S' ANZA	1	HWS	64.4	72.6	0.39	87.8	11.3	62.7	6M
870974	RULOFEEN#2A ANZA	2	HWS	64.2	70.5	0.36	87.1	10.0	60.8	2M
870975	(I-CNO*CAL)*ANZA, UC446*V	14	HWS	65.5	73.3	0.43	86.7	11.5	59.5	3M
870976	(C113232*R50)*ANZA, UC360*V	15	HWS	65.1	69.8	0.43	83.0	9.5	60.8	3M
870977	VEERY'S'	22	HWS	63.6	69.7	0.41	83.8	9.4	60.4	4M
870978	VEE'S'	23	HWS	64.1	69.6	0.39	84.6	9.8	60.5	4M
870979	CUCKOO'S'	25	HWS	63.7	66.1	0.32	84.4	8.8	61.6	6M
870980	SERI 82', UC705	26	HWS	63.4	69.9	0.39	84.9	9.5	60.7	4M
870981	F35, 70-MOA NAC	28	HWS	64.3	69.9	0.33	88.1	9.7	59.3	2M
870982	DGA-BJY'S'	29	HWS	63.1	70.0	0.32	88.6	9.9	60.6	7M
870983	DGA-BJY'S'	30	HWS	64.2	70.8	0.33	89.3	9.8	62.4	6M
870984	4777(2)*FKN-GB/VEE'S'	31	HWS	65.6	71.1	0.39	86.3	10.4	60.8	4M
870985	MAYA-NAC	32	HWS	64.1	70.0	0.35	87.4	10.2	61.8	4M
870986	(RRV-WW15/BJ'S'-ON(2	33	HWS	64.9	70.7	0.37	87.1	9.6	61.4	6M

1/ Observed Values Corrected to 14% Moisture Basis.5/ Particularly Promising Overall Quality Characteristics.3/ Absorption at 14% Moisture Corrected to 10% Protein.6/ Promising Overall Quality Characteristics.4/ Observed Values Corrected to 10% Protein.

NURSCO 33

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
870973	NURI'S' ANZA	1	HWS	63.7	62.4	3.4	915	834	4	Q-LVOL&BCRGR
870974	RULOFEN#2A ANZA	2	HWS	60.5	60.5	1.2	610	610	9	P-MTIME, LVOL&BCRGR
870975	(1-CNO*CAL)*ANZA, UC446*V	14	HWS	60.2	58.7	1.1	790	697	9	P-MTIME, LVOL&BCRGR
870976	(C113232*R50)*ANZA, UC360*V	15	HWS	61.0	61.5	1.8	635	666	9	P-MT, LVOL, BCRGR&MSCOR
870977	VEERY'S'	22	HWS	60.5	61.1	2.9	775	812	8	P-LVOL, BCRGR&MSCOR
870978	VEE'S'	23	HWS	61.0	61.2	3.3	770	782	8	P-LVOL&BCRGR
870979	CUCKOO'S'	25	HWS	61.1	62.3	3.0	555	629	9	P- " "
870980	SERI 82', UC705	26	HWS	61.9	62.4	2.5	735	766	8	P- " "
870981	F35, 70-MOA NAC	28	HWS	60.7	61.0	1.8	655	674	9	P-MTIME, LVOL&BCRGR
870982	DGA-BJY'S'	29	HWS	62.2	62.3	3.2	770	776	8	P-LVOL&BCRGR
870983	DGA-BJY'S'	30	HWS	63.9	64.1	3.5	780	792	5	P-LVOL&BCRGR
870984	4777(2)*FKN-GB/VEE'S'	31	HWS	62.9	62.5	3.0	760	735	5	P- " "
870985	MAYA-NAC	32	HWS	63.7	63.5	2.3	745	733	8	P-MTIME, LVOL&BCRGR
870986	(RRV-WW15/BJY'S'-ON(2	33	HWS	62.7	63.1	2.6	740	765	8	P- " "

COMMENTS: None of these hard white wheats have acceptable bread wheat baking quality.

NURSCO 34

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE	RMKS
					1/		1/	3/		4/		
870987	(BC60*CALIDAD)*ANZA	3	6/SWS	64.5	71.4	85.8	10.5	60.0	9.12	9.16	4M	
870988	(BC60*CALIDAD)*ANZA	5	5/SWS	63.5	72.4	87.5	10.3	59.2	9.20	9.22	2M	
870989	70W 10-19	6	6/SWS	65.0	70.2	85.6	10.7	60.3	9.22	9.28	2M	
870990	((221*166)*2A YR)*(70W10-19)	7	HWS	63.3	69.3	83.7	8.8	57.5	8.86	8.77	3M	Hard - Q-CODI
870991	((221*166)*2A YR)*(70W10-19)	8	6/SWS	63.2	71.0	86.5	9.4	58.7	9.30	9.25	2M	
870992	((221*166)*2A YR)*(70W10-19)	9	6/SWS	61.9	69.1	84.7	10.3	58.1	8.95	8.97	2M	Q-FYELD
870993	((221*166)*2A YR)*(70W10-19)	10	6/SWS	61.6	69.8	86.0	9.8	57.5	9.00	8.98	2M	Q-
870994	JUAN	20	TRIT	57.2	68.3	82.8	8.1	58.2	8.36	8.21	2M	P-FYELD&CODI

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein.4/ Observed Values Corrected to 10% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS: These soft white wheats appear to have good overall soft wheat quality.

NURSCO 35

HANFORD, CA

K.D. BEATTY

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
870995 1001			HRS	66.6	65.7	4.2	920	864	3 Q-LVOL&BCRGR	
870996 1006			HRS	67.1	67.6	5.3	885	916	3 Q-BCRGR	
870997 1007			HRS	65.0	64.9	4.2	1000	994	3 Q-	"
870998 1008			HRS	67.4	67.0	3.6	1005	980	2	
870999 1015			HRS	68.1	67.2	4.7	990	934	2	
871000 1042			HRS	66.8	66.1	3.1	935	892	5 Q-LVOL P-BCRGR	
871001 2033			HRS	67.1	67.2	5.9	885	891	5 Q-LVOL P- BCRGR	
871002 2057			HRS	66.2	66.0	4.3	825	813	5 P-LVOL&BCRGR	
871003 2058			HRS	66.0	64.9	2.6	980	912	2 Q-FYELD	
871004 2056			HRS	66.6	65.4	2.4	965	891	4 Q-MTIME, LVOL&BCRGR	
871005 2062			HRS	66.4	65.3	2.8	1000	932	2	
871006 2063			HRS	67.3	66.5	4.6	910	860	3 Q-LVOL&BCRGR	
871007 2089			HRS	66.0	64.8	4.6	870	796	5 P- "	"
871008 1026			HRS	66.6	66.3	5.0	885	866	4 P- "	"
871009 3102			HRS	65.5	67.1	3.4	840	939	5 P-BCRGR	
871010 3104			HRS	65.7	67.4	3.4	875	980	4 Q-BCRGR	
871011 3123			HRS	65.7	66.0	5.5	925	944	3	
871012 3124			HRS	65.5	66.5	6.6	870	932	5 P-BCRGR	
871013 3129			HRS	64.1	66.4	5.0	835	978	6 P- "	

COMMENTS: These analysis were done in cooperation with ESCAGEN Corp., at San Carlos, CA. Several of these selections, which are footnoted, appear to have good overall quality. There is a wide range of inherent baking quality as illustrated in the scatter plot of loaf volume vs protein content on page 1. A correlation of $r = .61$ is quite poor. Many of the selections fall well below the "expected" line for loaf volume, and usually associated with the abnormal loaf volume is a heavy crumb grain.

NURSCO 35

HANFORD, CA

K.D. BEATTY

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
870995 1001			HRS	63.6	71.1	0.36	88.1	12.9	65.0	5H
870996 1006			6/ HRS	62.8	73.9	0.35	91.5	11.5	66.9	6H
870997 1007			6/ HRS	64.0	72.9	0.36	90.0	12.1	64.2	4H
870998 1008			5/ HRS	64.0	73.4	0.34	91.5	12.4	66.3	5H
870999 1015			6/ HRS	64.0	72.6	0.38	88.5	12.9	66.5	5H
871000 1042			HRS	63.3	73.4	0.34	91.4	12.7	67.4	4H
871001 2033			HRS	62.0	71.0	0.37	87.2	11.9	65.5	7H
871002 2057			HRS	62.0	69.5	0.37	85.9	12.2	64.3	5H
871003 2058			6/ HRS	61.2	69.8	0.37	86.1	13.1	64.2	3H
871004 2056			HRS	60.8	70.7	0.38	86.3	13.2	64.2	3H
871005 2062			6/ HRS	61.6	70.7	0.37	86.8	13.1	64.1	3H
871006 2063			HRS	62.0	73.5	0.39	89.0	12.8	65.3	6H
871007 2089			HRS	61.6	70.7	0.30	90.7	13.2	63.6	5H
871008 1026			HRS	62.0	70.7	0.35	87.9	12.3	65.1	5H
871009 3102			HRS	62.8	71.5	0.34	89.2	10.4	65.9	6M
871010 3104			HRS	63.2	71.3	0.35	88.6	10.3	66.2	7M
871011 3123			6/ HRS	64.0	74.2	0.34	92.1	11.7	64.3	5H
871012 3124			HRS	63.6	73.5	0.36	90.1	11.0	64.8	5H
871013 3129			HRS	62.8	71.9	0.35	89.4	9.7	64.7	7M

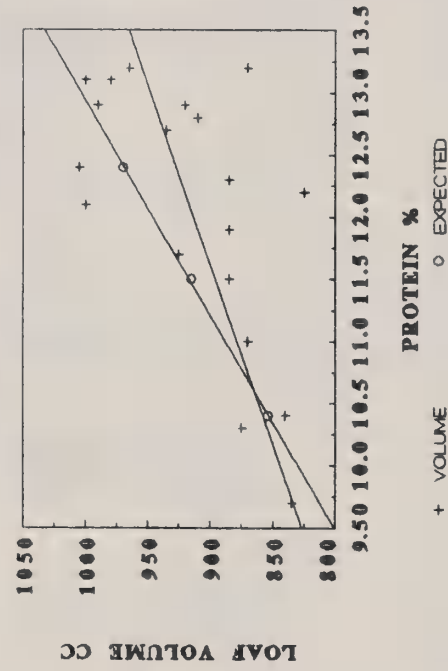
1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

LOAF VOLUME VS PROTEIN
HANFORD WHEAT CULTIVAR #1

NURSCO 36

HANFORD, CA

K.D. BEATTY

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871014	YECORA ROJO (CHECK) 87004									
871015	YOLO (CHECK) 87017		HRS	64.8	74.1	0.35	91.7	12.3	66.5	7H
871016	87024		HRS	64.4	76.3	0.35	93.7	10.8	64.7	4M
871017	87025		6/HRS	62.8	73.2	0.34	91.0	12.5	65.2	5H
871018	87012		5/HRS	62.4	72.2	0.34	89.9	11.4	63.5	5H
			6/HRS	63.6	71.9	0.35	89.3	12.2	65.6	5H
871019	87023		HRS	63.6	73.7	0.40	88.6	11.8	63.6	7H
871020	87010		HRS	61.2	69.7	0.36	86.6	11.5	66.0	5H
871021	87118		6/HRS	63.6	72.7	0.35	90.0	12.5	65.3	5H
871022	87022		HRS	64.0	70.9	0.34	88.5	12.6	64.6	4H
871023	87011		HRS	64.0	71.9	0.36	88.6	11.8	65.9	5H
871024	2032		HRS	64.0	72.8	0.33	91.0	12.3	65.1	4H
871025	87002		HRS	64.0	73.0	0.36	89.9	12.0	62.8	8M
871026	87101		HRS	63.6	72.5	0.35	89.8	12.1	65.8	4H
871027	87014		6/HRS	62.8	72.4	0.38	88.3	12.4	64.8	5H
LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
871014	YECORA ROJO (CHECK) 87004									
871015	YOLO (CHECK) 87017		HRS	67.0	66.7	7.4	925	906	2	
871016	87024		HRS	63.2	64.4	2.3	915	989	6	
871017	87025		HRS	66.4	65.9	3.7	975	944	3	
871018	87012		HRS	63.6	64.2	3.7	980	1017	2	
			HRS	66.5	66.3	4.3	960	948	2	Q-FYELD
871019	87023		HRS	65.1	65.3	5.8	820	832	6	P-LVOL&BCRGR
871020	87010		HRS	67.2	67.7	4.5	870	901	4	Q- " & "
871021	87118		HRS	67.5	67.0	4.6	965	934	3	
871022	87022		HRS	66.9	66.3	3.6	900	863	4	Q- " & "
871023	87011		HRS	67.4	67.6	4.7	910	922	4	Q-BCRGR
871024	2032		HRS	66.1	65.8	3.6	955	936	5	P-BCRGR
871025	87002		HRS	64.0	64.0	4.1	950	950	4	Q-BCRGR
871026	87101		HRS	65.6	65.5	3.2	900	894	3	P-LVOL Q-BCRGR
871027	87014		HRS	66.9	66.5	4.2	960	935	2	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 14% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: These samples were evaluated in cooperation with ESCAGEN Corp., at San Carlos, CA. Several of the selections footnoted as promising appear equal or better than Yecora Rojo in overall quality. Sample #87025 is excellent in overall quality.

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871028	(JUSTIN*SC662)ANZA	6/2	HRS	64.6	72.6	0.35	90.2	11.0	63.4	8M
871029	ANZA*JUSTIN	5/4	HRS	64.9	73.7	0.36	90.6	11.2	63.3	4H
871030	166RA 2* JUSTIN	5/5	HRS	65.0	71.8	0.32	90.5	11.3	62.2	8M
871031	TZPP*2*ANZA	9	HRS	65.3	72.8	0.39	88.1	10.7	61.3	3M
871032	TZPP*2*ANZA	5/10	HRS	64.4	71.5	0.32	90.1	10.2	63.3	4M
871033	TZPP*2*ANZA	11	HRS	63.9	72.4	0.35	89.6	11.1	61.8	3M
871034	MARCOS JUAREZ-INTA	13	HRS	63.3	69.4	0.35	86.5	10.7	62.8	8M
871035	1A7873	14	HWS	63.5	69.7	0.39	84.8	11.0	61.0	8M
871036	ALONDRA*S'	15	HRS	62.3	69.2	0.44	81.8	10.7	60.1	4M
871037	BUC*S'*BJY*S'	16	HRS	64.6	70.0	0.35	87.4	9.9	62.5	6M
871038	(INIA-ONA INIA-BB/JAY	17	HWS	64.1	67.7	0.38	83.3	9.7	62.2	8M
871039	KEA*S'-TOW*S'	18	HWS	63.5	67.3	0.35	84.2	9.7	63.2	8M
871040	YECORA ROJO	23	HRS	63.7	70.4	0.35	87.7	11.4	62.6	7H
871041	YOLO	24	HRS	64.0	72.6	0.34	90.7	9.5	59.9	2M
871042	((CI13232*R50)*ANZA)*((SC66	6/26	HRS	64.8	69.6	0.34	87.5	11.2	63.8	4H
871043	(166R*CHEYENNE)*SHASTA	6/27	HRS	64.8	69.8	0.37	86.0	10.5	62.2	6M
871044	(166R*CHEYENNE)*(KURTZMAN*ANZA)	30	HRS	64.5	68.9	0.34	86.4	10.1	61.4	7M
871045	(166R*CHEYENNE)*(KURTZMAN*ANZA)	34	HRS	64.5	70.2	0.37	86.5	10.3	60.2	5M
871046	(D6802*2A 166)*SHASTA	36	HRS	64.9	70.9	0.36	87.6	10.6	59.7	4M
871047	((TZPP*WTE)A 3*NP63)*(INIA*S	5/39	HRS	65.2	73.0	0.35	90.4	11.0	62.2	5H
871048	SHASTA*YECORA ROJO	41	HRS	64.5	70.8	0.34	88.5	11.0	61.5	8M
871049	SHASTA*CORCORAQUE F75	43	HRS	64.2	69.8	0.37	86.1	11.0	62.4	6M
871050	SHASTA*CORCORAQUE F75	44	HRS	64.3	72.3	0.36	88.9	10.6	63.2	6M
871051	(BB*S'*ANZA)*YECORA ROJO	5/45	HRS	63.8	72.0	0.32	90.7	11.0	59.8	8M

1/ Observed Values Corrected to 14% Moisture Basis.
3/ Absorption at 14% Moisture Corrected to 11% Protein.
4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

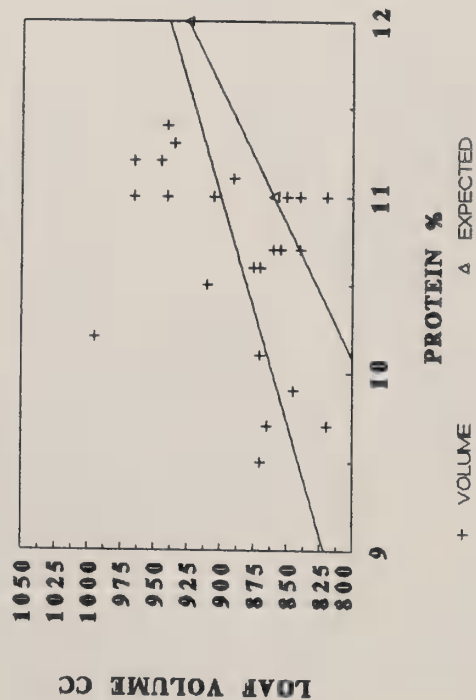
NURSCO 37

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
871028	(JUSTIN*SC662)ANZA	2	HRS	65.1	65.1	5.7	905	905	3 Q-BCRGR	
871029	ANZA*JUSTIN	4	HRS	63.2	63.0	3.2	965	953	2	
871030	166RA 2* JUSTIN	5	HRS	62.2	61.9	5.0	935	916	2	P-MT, LVOL&BCRGR
871031	TZPP*2*ANZA	9	HRS	61.2	61.5	1.8	840	859	8	
871032	TZPP*2*ANZA	10	HRS	63.2	64.0	2.5	995	1045	2	
871033	TZPP*2*ANZA	11	HRS	62.1	62.0	2.1	890	884	6 Q-LVOL&BCRGR	
871034	MARCOS JUAREZ-INTA	13	HRS	62.7	63.0	4.1	860	879	4 Q-LVOL&BCRGR	
871035	1A7873	14	HWS	61.2	61.2	3.7	850	850	3 Q-LVOL&BCRGR	
871036	ALONDRA*S'	15	HRS	60.5	60.8	2.7	855	874	7 Q-MSCOR, LVOL&BCRGR	
871037	BUC*S'*BJY*S'	16	HRS	61.6	62.7	2.7	845	913	6 Q-BCRGR	
871038	(INIA-ONA INIA-BB/JAY	17	HWS	61.6	62.9	3.5	865	946	6 P-FYELD&BCRGR	
871039	KEA*S'-TOW*S'	18	HWS	62.6	63.9	4.0	820	901	6 P-FYELD&BCRGR	
871040	YECORA ROJO	23	HRS	63.7	63.3	6.1	940	915	2	
871041	YOLO	24	HRS	57.6	59.1	1.7	870	963	7	
871042	((C113232*R50)*ANZA)*((SC66	26	HRS	64.7	64.5	2.5	945	933	2	
871043	(166R*CHEYENNE)*SHASTA	27	HRS	62.4	62.9	2.9	910	941	2	
871044	((166R*CHEYENNE))*((KURTZMAN*ANZA)	30	HRS	61.2	62.1	3.5	870	926	4 Q-FYELD&BCRGR	
871045	(166R*CHEYENNE))*((KURTZMAN*ANZA)	34	HRS	60.2	60.9	2.8	790	833	8 P-LVOL&BCRGR	
871046	(D6802*2A 166)*SHASTA	36	HRS	60.0	60.4	2.9	875	900	7 P-BCRGR	
871047	((((TZPP*WTE)A 3*NP63))*((INIA*S	39	HRS	62.9	62.9	4.1	940	940	2	
871048	SHASTA*YECORA ROJO	41	HRS	62.2	62.2	6.3	840	840	5 P-LVOL&BCRGR	
871049	SHASTA*CORCORQUE F75	43	HRS	63.1	63.1	3.3	820	820	6 P-LVOL&BCRGR	
871050	SHASTA*CORCORQUE F75	44	HRS	63.5	63.9	3.1	870	895	4 P-LVOL&BCRGR	
871051	(BB*S'*ANZA)*YECORA ROJO	45	HRS	60.5	60.5	6.4	965	965	2	

LOAF VOLUME VS PROTEIN
Advanced Bread Wheat YT (Exp. 712)



COMMENTS: Several of these selections (footnoted) are significantly better in overall milling and baking quality than Yecora Rojo and the expected performance for their protein contents (see accompanied plot). See "Remarks" for major deficiencies of those selections not footnoted.

NURSCO 38

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871052	(HUELQUEN*166R)*YR	6/1	HRS	66.2	68.6	0.32	87.3	9.5	62.0	8M
871053	(LB70*ANZA), UC364*VEERY*S'	2	HRS	64.5	69.3	0.33	87.5	8.9	62.6	7M
871054	[(TOB66*R50)*166], UC348*YR	3	HRS	64.6	67.5	0.33	85.5	9.2	59.3	4M
871055	(LB70*ANZA), UC364*YR	5	HRS	64.3	69.8	0.38	85.4	9.8	61.6	8M
871056	YOLO S* YR	6/9	HRS	64.7	70.7	0.36	87.4	9.5	61.0	7M
871057	YOLO *YR	11	HRS	65.4	71.6	0.35	88.9	9.5	61.9	6M
871058	YOLO*WS1877	6/14	HRS	66.4	71.6	0.33	90.1	9.5	61.9	8M
871059	[(CI13232*R50)*ANZA], UC355	16	HRS	65.0	70.4	0.34	88.3	9.8	62.1	6M
871060	[(CI13232*R50)*ANZA], UC355	17	HRS	63.8	70.2	0.34	87.9	9.4	59.6	8M
871061	YECORA ROJO	23	HRS	65.1	69.6	0.39	84.6	9.2	60.6	8M
871062	YOLO	24	HRS	64.2	72.3	0.35	89.8	7.9	58.9	2M
871063	[(I-CNO*CAL)*ANZA]*YR	26	HRS	63.1	68.3	0.39	83.2	10.4	61.1	8M
871064	[(I-CNO*CAL)*ANZA]*YR	27	HRS	64.8	69.8	0.34	87.3	10.0	60.0	7M
871065	[(I-CNO*CAL)*ANZA]*YR	28	HRS	66.6	70.8	0.35	88.0	10.0	62.7	8M
871066	[(I-CNO*CAL)ANZA]*WS1877	31	HRS	64.5	67.7	0.35	84.6	10.3	60.5	7M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 38

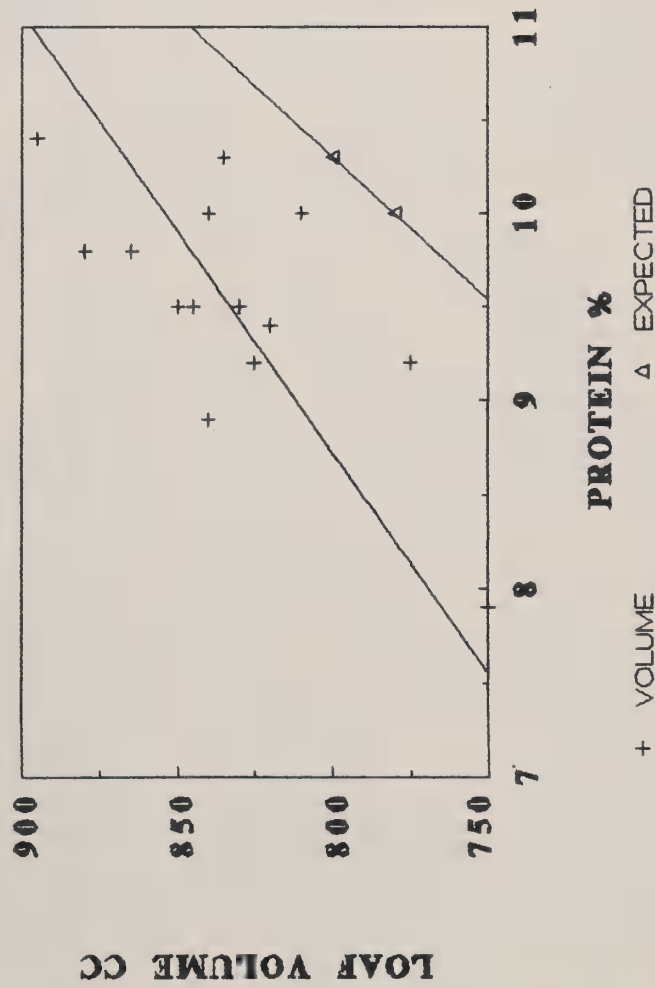
DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
871052	(HUELQUEN*166R)*YR	1	HRS	62.2	62.7	4.9	850	881	2	P-BCRGR
871053	(LB70*ANZA), UC364*VEERY*S'	2	HRS	61.2	62.3	4.3	840	908	6P	"
871054	[(T0866*R50)*166], UC348*YR	3	HRS	59.2	60.0	3.2	775	825	5Q-	"
871055	(LB70*ANZA), UC364*YR	5	HRS	62.1	62.3	4.4	880	892	4	
871056	YOLO S* YR	9	HRS	61.2	61.7	3.4	830	861	4	
871057	YOLO *YR	11	HRS	62.1	62.6	3.6	850	881	5Q-BCRGR	
871058	YOLO*WS1877	14	HRS	61.6	62.1	4.5	845	876	4	
871059	[(C113232*R50)*ANZA], UC355	16	HRS	62.6	62.8	2.8	865	877	4	
871060	[(C113232*R50)*ANZA], UC355	17	HRS	59.7	60.3	3.9	820	857	6P-BCRGR	
871061	YECORA ROJO	23	HRS	60.5	61.3	6.7	825	875	4	
871062	YOLO	24	HRS	57.0	59.1	2.3	750	880	8	3Q-FYELD, Long MT
871063	[(I-CNO*CAL)*ANZA]*YR	26	HRS	62.2	61.8	7.3	895	870	6Q-LVOL, P-BCRGR	
871064	[(I-CNO*CAL)*ANZA]*YR	27	HRS	60.7	60.7	4.0	810	810	4	
871065	[(I-CNO*CAL)*ANZA]*YR	28	HRS	63.4	63.4	4.3	840	840	4	
871066	[(I-CNO*CAL)*ANZA]*WS1877	31	HRS	61.5	61.2	4.1	835	816	4Q-FYELD&LVOL	

LOAF VOLUME VS PROTEIN Advanced Bread Wheat YT (Exp. 714)

COMMENTS: Several of these selections appear equal or better than Yecora Rojo in overall quality. Yecora Rojo was poorer than normal in bread crumb structure (score of 4), but better than expected in loaf volume (see accompanied plot). The better quality selections are footnoted. See "Remarks" for major deficiencies.



NURSCO 40

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
871077	(166*ANZA)*YR	6/2	HRS	64.1	72.4	0.40	87.1	9.7	60.1	8M
871078	(JUSTIN*SC66)*(KURTZMAN*ANZA)	3	HRS	64.2	74.3	0.35	91.6	10.0	58.8	6M
871079	(JUSTIN*SC66)*(KURTZMAN*ANZA)	4	HRS	65.6	74.3	0.36	91.4	9.6	59.4	6M
871080	(BB*S'*ANZA)*(KURTZMAN*ANZA)	5	HRS	66.3	72.4	0.38	88.1	10.4	59.9	6M
871081	(BB*S'*ANZA)*(KURTZMAN*ANZA)	6	HRS	64.0	71.4	0.37	87.4	8.5	59.0	6L
871082	(BB*S'*ANZA)*(KURTZMAN*ANZA)	7	HRS	64.8	73.8	0.35	91.1	9.3	60.4	8M
871083	(BB*S'*ANZA)*(KURTZMAN*ANZA)	8	HRS	65.4	73.3	0.36	89.9	9.2	59.0	7M
871084	(BB*S'*ANZA)*(166*ANZA)	6/9	HRS	64.4	71.5	0.36	88.5	9.4	59.1	5M
871085	(BB*S'*ANZA)*(166*ANZA)	10	HRS	64.7	72.7	0.41	86.8	9.3	58.4	6L
871086	(BB*S'*ANZA)*(166*ANZA)	11	HRS	64.6	72.6	0.41	86.8	9.5	58.4	6L
871087	YECORA ROJO	19	HRS	64.4	71.4	0.40	86.2	9.7	61.6	8M
871088	YOLO	20	HRS	64.3	73.3	0.35	90.7	8.0	57.2	2M
871089	((166A2*OLESEN)*166R)*YR	6/25	HWS	62.4	69.4	0.40	83.8	9.0	59.8	8M
871090	BANKUTI*RED RIVER	34	HRS	65.5	71.7	0.39	87.0	10.5	63.3	8M
871091	BANKUTI*RED RIVER	36	HRS	64.0	71.4	0.34	89.3	9.6	64.9	2M
871092	BANKUTI*RED RIVER	6/38	HRS	63.5	71.3	0.32	90.1	10.5	65.0	8M
871093	BANKUTI*RED RIVER	6/39	HRS	64.5	71.4	0.37	87.6	10.5	62.9	8M
871094	BANKUTI*RED RIVER	5/41	HRS	63.6	71.8	0.33	90.3	10.8	63.9	4M
871095	RED RIVER 68A*BANKUTI 284656	44	HRS	65.0	72.0	0.37	88.3	10.7	65.3	8M
871096	RED RIVER 68*2ABANKUTI 232943	45	HRS	65.2	69.7	0.36	86.6	9.7	62.2	5M

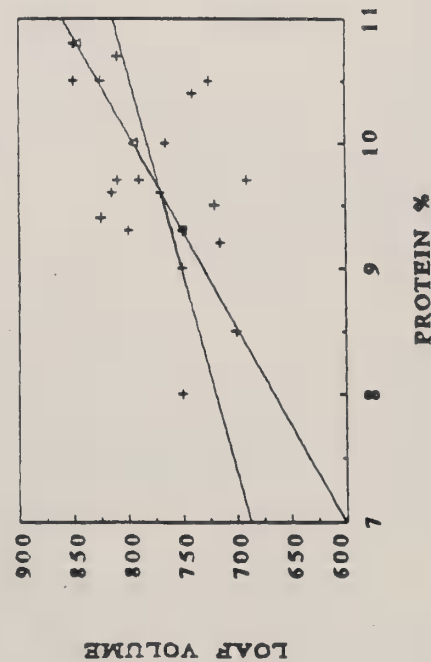
NURSCO 40

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
871077	(166*ANZA)*YR	2	HRS	61.5	61.8	6.1	810	829	4	4 = to Yecora Rojo
871078	(JUSTIN*SC66)*(KURTZMAN*ANZA)	3	HRS	60.5	60.5	4.4	765	765	8	8 P-LVOL, BCRGR
871079	(JUSTIN*SC66)*(KURTZMAN*ANZA)	4	HRS	60.7	61.1	4.1	770	795	6	6 Q-BCRGR
871080	(BB*S'*ANZA)*(KURTZMAN*ANZA)	5	HRS	62.0	61.6	4.0	740	715	8	8 P-LVOL, BCRGR
871081	(BB*S'*ANZA)*(KURTZMAN*ANZA)	6	HRS	59.2	60.7	3.9	700	793	8	8 P-BCRGR
871082	(BB*S'*ANZA)*(KURTZMAN*ANZA)	7	HRS	61.4	62.1	4.4	800	843	6	6 Q-BCRGR
871083	(BB*S'*ANZA)*(KURTZMAN*ANZA)	8	HRS	59.9	60.7	4.1	715	765	6	6 P-LVOL, BCRGR
871084	(BB*S'*ANZA)*(166*ANZA)	9	HRS	60.2	60.8	4.4	825	862	4	4 Yecora Rojo
871085	(BB*S'*ANZA)*(166*ANZA)	10	HRS	59.4	60.1	4.5	750	793	5	5 Q-BCRGR
871086	(BB*S'*ANZA)*(166*ANZA)	11	HRS	59.6	60.1	6.0	720	751	6	6 Q-LVOL, BCRGR
871087	YECORA ROJO	19	HRS	63.0	63.3	7.7	790	809	4	
871088	YOL	20	HRS	55.9	57.9	2.1	750	874	7	
871089	((166A2*OLESEN)*166R)*YR	25	HWS	60.5	61.5	6.4	750	812	4	4 Q-FYELD
871090	BANKUTI*RED RIVER	34	HRS	65.5	65.0	7.0	725	694	5	5 P-LVOL, Q-BCRGR
871091	BANKUTI*RED RIVER	36	HRS	66.2	66.6	4.6	815	840	6	6 Q-BCRGR
871092	BANKUTI*RED RIVER	38	HRS	67.2	66.7	4.8	825	794	3	
871093	BANKUTI*RED RIVER	39	HRS	65.1	64.6	7.1	850	819	4	
871094	BANKUTI*RED RIVER	41	HRS	66.4	65.6	2.9	850	800	4	
871095	RED RIVER 68A*BANKUTI 284656	44	HRS	67.7	67.0	7.7	810	767	5	5 Q-LVOL, BCRGR
871096	RED RIVER 68*2ABANKUTI 232943	45	HRS	63.6	63.9	4.0	690	709	8	8 P-LVOL, BCRGR

LOAF VOLUME VS PROTEIN
Prelim. Bread Wheat YT (Exp 716)
+ LOAF VOLUME A EXPECTED



COMMENTS: These were all good milling and strong in dough mixing (for their protein).
The most reoccurring problem was coarse bread crumb structure. The
plot shows a wide range of baking quality as reflected by loaf volume.

NURSCO 41

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
871097	JUPATECO 73•S'•I66R	6/3	HRS	65.0	69.8	0.32	88.7	9.3	59.6	8M
871098	(D6301**NAI60)*TANORI 71	8	HRS	65.3	70.4	0.36	87.2	9.0	59.3	8M
871099	(BB•S'•ANZA)*YR	15	HRS	66.0	72.3	0.34	90.2	9.4	58.9	7M
871100	YECORA ROJO	19	HRS	65.2	70.3	0.37	86.6	9.1	58.7	8M
871101	YOLO	20	HRS	64.5	72.3	0.34	90.3	7.6	56.1	3M
871102	(ANZA*TOB66)*YR	5/29	HRS	63.5	72.7	0.35	89.8	9.6	57.6	8M

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
871097	JUPATECO 73•S'•I66R	3	HRS	61.6	61.3	5.1	745	726	3	6-Q-BCRGR
871098	(D6301**NAI60)*TANORI 71	8	HRS	61.0	61.0	7.5	765	765	6-Q-BCRGR	
871099	(BB•S'•ANZA)*YR	15	HRS	61.0	60.6	4.8	725	700	5-Q-BCRGR	
871100	YECORA ROJO	19	HRS	60.5	60.4	7.0	750	744	4	
871101	YOLO	20	HRS	56.4	57.8	2.2	705	792	8	
871102	(ANZA*TOB66)*YR	29	HRS	59.9	59.3	5.7	765	728	2	

COMMENTS: This nursery was low in protein for very meaningful results. Selections No.'s 3 and 29 appear good in overall quality in relation to Yecora Rojo.

NURSCO 42

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
871103	BANKUTI*RED RIVER	5/ 8	HRS	63.4	71.8	0.31	91.4	10.2	61.8	8M
871104	BANKUTI*RED RIVER	5/ 9	HRS	64.4	70.7	0.31	90.3	11.6	66.2	5H
871105	RED RIVER 68A2*BANKUTI 284656	10	HRS	65.0	72.6	0.33	90.8	10.7	63.5	8M
871106	(SON 64*R50)*166	6/ 17	HRS	65.5	69.6	0.35	86.9	10.2	61.7	6M
871107	YECORA ROJO	19	HRS	64.2	70.6	0.36	87.4	10.3	61.0	8M
871108	YOLO	20	HRS	64.7	72.7	0.34	90.5	8.3	59.0	3M
871109	THATCHER, INSENS*YR	23	HRS	64.3	68.0	0.31	87.3	10.6	61.2	8M
871110	THATCHER, INSENS*YR	24	HRS	64.0	68.4	0.31	87.5	10.5	61.6	8M
871111	(DIBO*MFLO)*ANZA	25	HRS	64.6	69.9	0.32	88.9	9.4	61.0	8L
871112	SHASTA*166R	37	HRS	65.6	69.2	0.35	86.2	9.4	60.1	7M
871113	SHASTA*166R	6/ 39	HRS	66.0	70.0	0.32	88.6	11.0	61.3	6M
871114	SHASTA*YR	42	HRS	62.6	69.2	0.37	85.5	10.4	60.1	8M
871115	SHASTA*YR	6/ 43	HRS	64.5	68.6	0.35	85.6	10.4	60.9	4H
LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
871103	BANKUTI*RED RIVER	8	HRS	63.7	63.5	5.3	765	753	2	
871104	BANKUTI*RED RIVER	9	HRS	69.5	67.9	5.0	850	751	2	Q-BCRGR
871105	RED RIVER 68A2*BANKUTI 284656	10	HRS	65.9	65.2	6.1	775	732	4	Q-BCRGR
871106	(SON 64*R50)*166	17	HRS	63.6	63.4	3.9	795	783	3	Q-BCRGR
871107	YECORA ROJO	19	HRS	63.0	62.7	7.0	805	786	2	
871108	YOLO	20	HRS	59.0	60.7	1.9	765	870	9	Q-FYELD,BCRGR
871109	THATCHER, INSENS*YR	23	HRS	63.5	62.9	4.3	745	708	3	Q-FYELD,BCRGR
871110	THATCHER, INSENS*YR	24	HRS	63.8	63.3	4.7	720	689	3	Q-FYELD,BCRGR
871111	(DIBO*MFLO)*ANZA	25	HRS	62.1	62.7	5.9	665	702	6	Q-P-BCRGR
871112	SHASTA*166R	37	HRS	61.2	61.8	4.0	705	742	6	Q-P-BCRGR
871113	SHASTA*166R	39	HRS	64.0	63.0	3.2	690	628	2	Q-LVOL
871114	SHASTA*YR	42	HRS	62.2	61.8	4.5	690	665	5	Q-LVOL,BCRGR
871115	SHASTA*YR	43	HRS	63.0	62.6	4.7	775	750	3	Q-BCRGR

COMMENTS: Several of these selections appear equal to or better than Yecora Rojo in overall quality (footnoted). Others are marginal. See "Remarks".

NURSCO 43

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
871116	RED RIVER 68*2ABANKUTI 232943	1	HRS	64.6	72.1	0.38	87.9	11.4	65.5	7H
871117	RED RIVER 68*2ABANKUTI 232943	3	HRS	65.2	71.6	0.35	89.0	11.4	65.4	7H
871118	(JUSTIN*SC66)*YR	7	HWS	64.3	70.3	0.35	87.4	9.7	59.2	8M
871119	YECORA ROJO	19	HRS	64.2	70.7	0.36	87.6	10.2	61.5	8M
871120	((166A2*OLESEN)*166R)*YR	40	HRS	64.1	69.4	0.36	85.8	8.9	59.2	8L

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
871116	RED RIVER 68*2ABANKUTI 232943	1	HRS	68.6	67.2	11.7	800	713	4-Q-BCRGR	
871117	RED RIVER 68*2ABANKUTI 232943	3	HRS	68.5	67.1	10.8	740	653	3-Q-LVOL	
871118	(JUSTIN*SC66)*YR	7	HWS	60.6	60.9	5.8	765	784	4-Q-BCRGR	
871119	YECORA ROJO	19	HRS	63.4	63.2	7.8	785	773	3	
871120	((166A2*OLESEN)*166R)*YR	40	HRS	59.8	60.9	6.7	710	778	4-Q-BCRGR	

COMMENTS: All of these selections appear marginal (questionable) in baking performance relative to Yecora Rojo. They are either slightly lower in loaf volume or heavier in bread crumb grain. (See Remarks).

NURSCO 44

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
						1/ 1/		1/ 1/	3/ 3/		
871121	(BC60*CAL IDAD)*ANZA	1	HWS	64.3	71.8	0.37	88.3	10.5	56.8	6M	58.0
871122	(BC60*CAL IDAD)*ANZA	6/2	HWS	65.1	70.7	0.34	88.6	10.8	59.0	6M	61.0
871123	((221*166)*2AYR)*(70W10-19*A)	6/3	SWS	64.8	72.2	0.38	89.1	10.4	55.3	2M	
871124	(BC60*CAL IDAD)*ANZA	5/6	SWS	63.6	72.0	0.39	87.9	10.2	55.4	2M	
871125	(BC60*CAL IDAD)*ANZA	5/9	SWS	63.8	71.9	0.36	89.6	10.2	54.9	2M	
871126	BLUE BAART RAD 500-3-1*ANZA	14	SWS	62.4	67.6	0.34	85.6	9.2	56.3	4M	56.7
871127	YOLO	15	HRS	64.0	72.2	0.34	89.9	9.3	56.3	3M	56.3
871128	YECORA ROJO	16	HRS	63.8	71.1	0.36	87.7	11.4	58.4	6H	61.0
871129	((221*166)*2AYR)*(70W10-19*A)	19	SWS	62.9	70.0	0.37	86.5	9.2	54.6	2M	
871130	((221*166)*2AYR)*(70W10-19*A)	6/20	SWS	63.6	70.7	0.40	85.4	9.5	54.8	4L	
871131	((221*166)*2AYR)*(70W10-19*A)	24	SWS	64.1	69.6	0.80	63.5	10.0	54.1	5M	55.3
871132	((221*166)*2AYR)*(70W10-19*A)	28	SWS	62.3	70.0	0.42	83.3	9.0	53.7	2L	
871133	((221*166)*2ASHASTA)*(70W-	29	SWS	64.7	66.1	0.34	83.4	9.6	56.2	3L	
871134	((221*166)*2ASHASTA)*(70W-	30	SWS	62.4	69.7	0.40	84.5	9.6	53.0	2M	
871135	((BC60*CAL)*ANZA 2A SHASTA)*	34	SWS	61.5	68.9	0.39	83.8	9.7	54.0	2M	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 44

DAVIS, CA

C.O. QUALSET

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	RMKS
871121	(BC60*CAL IDAD)*ANZA	1	HWS	57.5	3.0	765	734	7	8.59	8.63	P-Bread & Cookie
871122	(BC60*CAL IDAD)*ANZA	2	HWS	60.2	3.0	890	840	4	8.60	8.66	Q-BCRGR
871123	((221*166)*2AYR)*(70W10-19*A)	3	SWS						9.15	9.19	
871124	(BC60*CAL IDAD)*ANZA	6	SWS						9.55	9.57	
871125	(BC60*CAL IDAD)*ANZA	9	SWS						9.15	9.17	
871126	BLUE BAART RAD 500-3-1*ANZA	14	SWS	57.5	2.6	850	898	7	9.24	9.15	P-FYELD
871127	YOLO	15	HRS	57.0	2.0	835	878	7	8.82	8.77	
871128	YECORA ROJO	16	HRS	59.6	5.4	905	818	2	8.39	8.50	
871129	((221*166)*2AYR)*(70W10-19*A)	19	SWS						9.32	9.24	Q-FYELD
871130	((221*166)*2AYR)*(70W10-19*A)	20	SWS						9.50	9.44	Q-FYELD
871131	((221*166)*2AYR)*(70W10-19*A)	24	SWS	55.3	3.0	840	840	8	8.87	8.87	P-BCRGR, FYELD, Q-CODI
871132	((221*166)*2AYR)*(70W10-19*A)	28	SWS						8.96	8.85	Q-FYELD, CODI
871133	[(221*166)*2ASHASTA]*(70W-	29	SWS						9.26	9.22	P-FYELD
871134	[(221*166)*2ASHASTA]*(70W-	30	SWS						9.21	9.17	Q-FYELD
871135	[(BC60*CAL)*ANZA 2A SHASTA]*	34	SWS						9.20	9.17	P-FYELD

COMMENTS: The class designation for these (SWS) could be clubs, no judgements were made on kernel shape. Id No.'s 1 and 2 are hard endosperm wheats. No. 6 appears outstanding in overall quality. Others footnoted have some promise. See "Remarks" for major deficiencies.

NURSCO 48

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
871242	CERCO/MCCALL	6/N8402401	HRW	60.3	71.7	0.37	88.0	14.0	66.8	3H
871243	N7405001/N7602301	6/N8407203	HRW	59.8	69.2	0.39	84.2	13.6	66.6	2H
871244	ID000092/N7402703	N8500702	HRW	61.7	71.4	0.38	87.3	14.3	65.7	3H
871245	CERCO/HATTON	N8505401	HRW	61.3	71.7	0.36	88.4	14.7	67.1	3H
871246	CER/HTN//N7905001	6/N8508903	HRW	60.2	71.2	0.36	87.8	14.6	69.9	6H
871247	N7701501/VH078279	6/WA7619	HRW	60.0	70.9	0.35	88.0	13.4	67.2	5H
871248	N7701501/VH078279	6/WA7620	HRW	60.1	69.6	0.35	87.0	13.0	67.0	5H
871249	HATTON	C1017772	HRW	61.9	71.7	0.36	88.3	13.9	67.0	3H
871250	WESTON	C1017727	HRW	61.4	71.1	0.37	87.5	14.1	67.9	2H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
871242	CERCO/MCCALL	N8402401	HRW	67.5	67.5	3.6	980	980	3 Q-BCRGR	
871243	N7405001/N7602301	N8407203	HRW	67.4	67.8	2.5	1010	1035	3 Q-FYELD&BCRGR	
871244	ID000092/N7402703	N8500702	HRW	65.7	65.4	3.2	955	936	1 Q-LVOL	
871245	CERCO/HATTON	N8505401	HRW	68.0	67.3	4.0	950	907	2 Q-	
871246	CER/HTN//N7905001	N8508903	HRW	70.2	69.6	5.8	1025	988	1	
871247	N7701501/VH078279	WA7619	HRW	66.3	66.9	5.0	1025	1062	2	
871248	N7701501/VH078279	WA7620	HRW	65.7	66.7	3.9	1010	1072	4 Q-BCRGR&FYELD	
871249	HATTON	C1017772	HRW	67.1	67.2	2.9	995	1001	2	
871250	WESTON	C1017727	HRW	67.7	67.6	1.9	1050	1044	2	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 14% Protein.

4/ Observed Values Corrected to 14% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: This nursery had excellent protein levels, however, several of the selections did not perform in loaf volume response as expected from 13-14% protein flour. Others had some questionable bread crumb characteristics (See "Remarks").

NURSCO 49

TULELAKE, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871251 1		2-52	HRS	59.3	59.7	0.31	78.7	12.9	64.9	1H
871252 2		3-57	HRS	60.4	59.0	0.32	77.1	11.7	64.0	2M
871253 3		4-63	HRS	60.2	61.0	0.31	79.7	11.9	64.5	4M
871254 4		6-44	HRS	60.0	61.4	0.31	80.2	12.3	62.4	2M
871255 5		8-67	HRS	60.1	61.4	0.30	81.0	12.1	62.6	2M
871256 6		10-48	HRS	59.5	58.3	0.30	77.7	11.8	62.7	2M
871257 7		11-47	HRS	60.9	60.9	0.31	79.9	11.8	63.1	2M
871258 8		12-39	HRS	59.3	57.5	0.32	75.6	12.0	60.8	2M
871259 9		14-45	HRS	59.8	65.3	0.34	83.0	12.2	62.0	2M
871260 10		15-64	HRS	59.2	58.9	0.30	78.2	11.1	62.8	2M
871261 11		16-59	HRS	60.0	59.2	0.39	73.7	12.1	61.2	2M
871262 12		18-72	HRS	58.7	56.1	0.35	72.9	11.8	61.7	2M
871263 13		19-43	HRS	60.9	59.0	0.32	77.3	12.0	61.8	2M
871264 14		22-71	HRS	60.0	57.3	0.30	76.5	11.7	62.6	2M
871265 15		23-68	HRS	58.8	60.2	0.37	75.8	11.3	61.6	2M
871266 16		24-65	HRS	60.4	58.8	0.29	78.7	11.5	61.8	2M
871267 17		26-76	HRS	60.6	61.4	0.30	80.9	12.0	62.5	2M
871268 18		61-74	HRS	61.2	59.2	0.31	78.0	12.4	62.9	2M
871269 19		27-60	HRS	60.2	65.1	0.33	83.3	12.9	62.5	1H
871270 20		28-49	HRS	60.2	58.4	0.29	78.2	11.8	62.4	2M
871271 21	YECORA ROJO	1	HRS	63.9	69.8	0.34	87.3	13.2	65.5	4H
871272 22		17	HRS	61.0	67.0	0.37	82.8	12.7	66.8	5H
871273 23		6/46	HRS	61.1	70.0	0.41	84.1	12.8	64.5	4H
871274 24		70	HRS	63.8	65.8	0.35	82.6	13.3	65.7	4H
871275 25	ANZA	5	HRS	62.9	68.0	0.38	83.6	10.9	62.1	2M
871276 26		29	HRS	62.5	67.4	0.37	83.6	10.7	62.5	2M
871277 27		50	HRS	64.3	66.4	0.35	83.5	10.3	61.4	2M
871278 28		66	HRS	62.8	68.1	0.37	84.4	10.6	62.1	2M
871279 29		30	HRS	61.2	57.5	0.28	77.6	11.8	61.2	2M
871280 30		31	HRS	60.7	57.7	0.27	78.5	12.1	60.8	2M
871281 31		56	HRS	59.8	59.4	0.33	77.0	11.7	61.2	2M
871282 32		69	HRS	60.0	56.0	0.32	73.9	12.2	61.5	2M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 49

TULELAKE, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
871251 1		2-52	HRS	67.5	66.6	1.4	805	749	8 P-FYELD, MT, LVOL&BCRGR	"
871252 2		3-57	HRS	65.4	65.7	1.4	685	704	9 " " " " " "	"
871253 3		4-63	HRS	66.1	66.2	2.4	665	671	8 " " " " " "	"
871254 4		6-44	HRS	64.4	64.1	1.3	660	641	9 " " " " " "	"
871255 5		8-67	HRS	64.4	64.3	1.7	620	614	9 " " " " " "	"
871256 6		10-48	HRS	64.2	64.4	1.4	715	727	9 " " " " " "	"
871257 7		11-47	HRS	64.6	64.8	1.7	660	672	9 " " " " " "	"
871258 8		12-39	HRS	62.5	62.5	1.3	630	630	9 " " " " " "	"
871259 9		14-45	HRS	63.9	63.7	1.5	590	578	9 " " " " " "	"
871260 10		15-64	HRS	63.6	64.5	1.8	610	666	9 " " " " " "	"
871261 11		16-59	HRS	63.0	62.9	1.4	680	674	9 " " " " " "	"
871262 12		18-72	HRS	63.2	63.4	1.4	555	567	9 " " " " " "	"
871263 13		19-43	HRS	63.5	63.5	1.5	615	615	9 " " " " " "	"
871264 14		22-71	HRS	64.0	64.3	2.0	650	669	9 " " " " " "	"
871265 15		23-68	HRS	62.6	63.3	1.5	665	708	9 " " " " " "	"
871266 16		24-65	HRS	63.0	63.5	1.5	630	661	9 " " " " " "	"
871267 17		26-76	HRS	64.2	64.2	1.8	660	660	9 " " " " " "	"
871268 18		61-74	HRS	65.0	64.6	1.7	775	750	7 " " " " " "	"
871269 19		27-60	HRS	65.1	64.2	1.4	680	624	9 " " " " " "	"
871270 20		28-49	HRS	63.9	64.1	1.7	650	662	9 " " " " " "	"
871271 21	YECORA ROJO	1	HRS	68.4	67.2	3.0	965	891	2	"
871272 22		17	HRS	69.2	68.5	3.6	925	882	3 Q-FYELD	"
871273 23		46	HRS	67.0	66.2	3.0	945	895	3	"
871274 24		70	HRS	68.7	67.4	3.0	940	859	3 P-FYELD	"
871275 25	ANZA	5	HRS	62.7	63.8	1.7	660	728	9 P-FYELD, MT, LVOL&BCRGR	"
871276 26		29	HRS	62.9	64.2	1.8	695	776	9 " " " " " "	"
871277 27		50	HRS	61.4	63.1	1.7	650	755	9 " " " " " "	"
871278 28		66	HRS	62.4	63.8	1.7	660	747	9 " " " " " "	"
871279 29		30	HRS	62.7	62.9	1.4	675	687	9 " " " " " "	"
871280 30		31	HRS	62.6	62.5	1.5	605	599	9 " " " " " "	"
871281 31		56	HRS	62.6	62.9	1.5	660	679	9 " " " " " "	"
871282 32		69	HRS	63.4	63.2	1.4	650	638	9 " " " " " "	"

COMMENTS: Only one or two (Selections 46, 17, & 70) have acceptable overall milling and baking quality. Most were characterized by low flour yield, short dough mixing, low loaf volume and heavy bread crumb properties.

NURSCO 50

TULELAKE, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871283		4	HRW	61.2	67.9	0.34	85.4	12.9	61.9	2H
871284		5	HRW	60.6	67.8	0.34	85.7	12.3	62.0	1H
871285		6/6	HRW	60.8	66.9	0.34	84.6	12.2	65.3	4H
871286		7	HRW	65.7	67.4	0.31	86.3	11.8	63.2	2H
871287		8	HRW	61.2	67.4	0.34	85.2	10.4	63.6	2H
871288		9	HRW	64.6	68.4	0.31	87.8	13.5	65.3	2H
871289		10	HRW	64.0	68.1	0.30	88.0	12.4	66.5	2H
871290		6/11	HRW	63.7	68.6	0.32	87.3	11.0	66.3	4H
871291		12	HRW	63.1	62.9	0.31	81.7	11.0	65.5	3H
871292		6/13	HRW	63.8	68.4	0.32	86.9	10.1	67.6	6M
871293		14	HRW	64.2	68.8	0.32	87.3	11.9	65.8	2H
871294		6/15	HRW	63.0	70.3	0.33	88.6	11.5	65.8	3H
871295		16	HRW	62.6	71.1	0.34	88.8	9.6	65.2	6M
871296		17	HRW	62.1	69.8	0.33	88.1	11.7	64.7	2H
871297		6/18	HRW	63.8	69.1	0.35	86.2	11.4	66.1	5H
871298		E	HRW	63.3	68.6	0.31	87.6	12.7	68.1	4H
871299		T	HRW	65.6	68.4	0.30	88.2	12.7	66.3	3H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 51

TULELAKE, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 1/	MTYPE
871300		2	HRS	63.0	70.4	0.38	86.0	10.2	65.6	1H
871301		<u>6/3</u>	HRS	62.8	69.3	0.37	85.3	12.6	67.2	4H
871302		4	HRS	62.0	69.4	0.34	87.0	12.0	67.3	4H
871303		5	HRS	62.9	65.2	0.34	82.4	13.5	67.0	3H
871304		6	HRS	63.8	69.6	0.34	87.5	13.3	68.0	3H
871305		7	HRS	61.7	68.6	0.38	84.0	12.8	68.2	4H
871306		8	HRS	62.6	70.9	0.37	87.2	12.3	68.0	4H
871307		9	HRS	64.0	71.0	0.37	87.2	10.9	65.6	2H
871308		<u>6/10</u>	HRS	62.4	70.7	0.38	86.4	10.8	68.5	4H
871309		11	HRS	62.4	67.4	0.35	84.5	14.3	67.0	2H
871310		12	HRS	63.6	70.2	0.35	87.4	13.7	68.8	3H
871311		13	HRS	63.3	69.2	0.37	85.2	12.5	67.3	3H
871312		<u>6/14</u>	HRS	63.0	71.1	0.40	85.9	12.0	70.2	5H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 2/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
871300		2	HRS	65.5	67.3	1.7	815	927	9 P-MTIME, LVOL&BCRGR	
871301		3	HRS	69.5	68.9	3.2	1060	1023	4 Q-BCRGR	
871302		4	HRS	69.0	69.0	3.5	950	950	5 Q-LVOL&BCRGR	
871303		5	HRS	70.2	68.7	2.5	990	897	3 Q-LVOL, BCRGR P-FYELD	
871304		6	HRS	71.0	69.7	2.3	990	909	3 Q-MTIME, LVOL&BCRGR	
871305		7	HRS	70.7	69.9	2.9	1000	950	5 Q-BCRGR	
871306		8	HRS	70.0	69.7	3.0	1055	1036	5 Q-BCRGR	
871307		9	HRS	66.2	67.3	1.8	925	993	6 P-MTIME&BCRGR	
871308		10	HRS	69.0	70.2	3.6	930	1004	4 Q-BCRGR	
871309		11	HRS	71.0	68.7	1.9	1030	887	3 P-MTIME&LVOL	
871310		12	HRS	72.2	70.5	3.1	1050	945	4 Q-LVOL&BCRGR	
871311		13	HRS	69.5	69.0	2.8	875	844	4 " "	
871312		14	HRS	71.9	71.9	5.2	990	990	4 Q-BCRGR	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

COMMENTS: A check variety for reference was not identified, therefore compared to each other, selections #3, 10, & 14 appear most promising in overall quality. All were poorer in bread crumb structure than expected and loaf volumes were generally low for the protein levels.

NURSCO 52

DAVIS, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871313	1A	1	HRS	60.4	63.4	0.43	75.9	13.8	64.9	2M
871314	1A/1B F1	2	HRS	60.8	63.7	0.34	81.1	12.2	63.2	2M
871315	1A/1B F2	3	HRS	61.2	63.1	0.32	81.6	12.2	63.8	2M
871316	1A/1D F1	4	HRS	61.2	62.8	0.31	81.9	12.1	62.8	3M
871317	1A/1D F2	5	HRS	60.8	62.9	0.32	81.1	12.0	62.3	3M
871318	1A/6A F1	6	HRS	61.0	63.4	0.32	81.7	12.3	63.1	2M
871319	1A/6A F2	7	HRS	60.6	63.1	0.30	82.6	12.7	62.7	2M
871320	1A/6B F1	8	HRS	59.4	61.4	0.34	78.8	13.7	62.7	2M
871321	1A/6B F2	9	HRS	60.4	61.8	0.31	80.8	13.7	62.1	2M
871322	1A/6D F1	10	HRS	61.6	63.8	0.36	80.3	12.4	61.8	2M
871323	1A/6D F2	11	HRS	60.4	62.2	0.33	80.0	12.8	61.0	2M
871324	1A/4B F1	12	HRS	61.6	64.1	0.29	84.1	11.9	62.0	2M
871325	1A/4B F2	13	HRS	61.2	64.9	0.29	84.9	12.6	61.2	2M
871326	1A/7B F1	14	HRS	61.2	65.9	0.30	85.7	12.9	62.0	2M
871327	1A/7B F2	15	HRS	61.2	65.2	0.32	83.9	13.2	62.6	2M
871328	1A/5D F1	16	HRS	60.8	66.0	0.31	85.0	13.2	62.6	2M
871329	1A/5D F2	17	HRS	61.2	65.5	0.32	84.2	13.6	62.3	2M
871330	1A/C.S. F1	18	HRS	60.8	63.5	0.33	81.7	12.7	62.8	2M
871331	1A/C.S. F2	19	HRS	60.8	54.7	0.31	73.2	12.5	62.7	2M
871332	1B/1D F1	20	HRS	60.4	63.7	0.33	81.8	11.8	62.1	3M
871333	1B/1D F2	21	HRS	61.6	64.1	0.30	83.7	11.6	60.1	1M
871334	1B/6A F1	22	HRS	61.2	63.7	0.30	83.1	11.5	62.4	2M
871335	1B/6A F2	23	HRS	61.0	63.0	0.30	82.3	11.8	61.6	2M
871336	YECORA ROJO	24	HRS	63.8	70.7	0.40	85.5	11.3	62.2	8M
871337	ANZA	25	HRS	64.0	72.1	0.32	91.1	10.4	59.9	3M
871338	CHINESE SPRING	26	HRS	61.2	61.1	0.31	79.9	12.4	61.6	2M
871339	MORAN	27	HRS	60.0	69.1	0.33	87.1	12.4	62.6	5H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 52

DAVIS, CA

QUALSET/LEVI

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
871313 1A		1	HRS	68.4	66.6	1.4	820	708	8	
871314 1A/1B F1		2	HRS	65.1	64.9	1.5	830	818	8	
871315 1A/1B F2		3	HRS	65.7	65.5	1.7	820	808	7	
871316 1A/1D F1		4	HRS	63.6	63.5	2.0	770	764	8	
871317 1A/1D F2		5	HRS	63.0	63.0	2.0	805	805	8	
871318 1A/6A F1		6	HRS	64.1	63.8	1.7	830	811	8	
871319 1A/6A F2		7	HRS	64.1	63.4	1.5	840	797	7	
871320 1A/6B F1		8	HRS	65.1	63.4	1.4	835	730	9	
871321 1A/6B F2		9	HRS	64.5	62.8	1.4	775	670	8	
871322 1A/6D F1		10	HRS	62.9	62.5	1.5	775	750	8	
871323 1A/6D F2		11	HRS	62.5	61.7	1.2	775	725	8	
871324 1A/4B F1		12	HRS	62.6	62.7	1.5	740	746	9	
871325 1A/4B F2		13	HRS	62.5	61.9	1.4	830	793	8	
871326 1A/7B F1		14	HRS	63.6	62.7	1.4	845	789	8	
871327 1A/7B F2		15	HRS	64.1	62.9	1.3	850	776	6	
871328 1A/5D F1		16	HRS	64.0	62.8	1.4	825	751	8	
871329 1A/5D F2		17	HRS	64.1	62.5	1.4	780	681	8	
871330 1A/C.S. F1		18	HRS	63.7	63.0	1.5	800	757	9	
871331 1A/C.S. F2		19	HRS	63.4	62.9	1.4	775	744	8	
871332 1B/1D F1		20	HRS	62.1	62.3	2.1	740	752	8	
871333 1B/1D F2		21	HRS	59.9	60.3	2.1	765	790	7	
871334 1B/6A F1		22	HRS	62.1	62.6	1.8	745	776	9	
871335 1B/6A F2		23	HRS	61.6	61.8	1.8	795	807	8	
871336 YECORA ROJO		24	HRS	63.2	63.9	6.8	875	918	2	
871337 ANZA		25	HRS	59.0	60.6	2.1	740	838	8	
871338 CHINESE SPRING		26	HRS	62.2	61.8	1.3	745	720	9	
871339 MORAN		27	HRS	64.7	64.3	4.2	960	935	1	

COMMENTS: None of these Chinese Spring lines had acceptable flour yield, mixing time, loaf volume, or bread crumb structure. Yecora Rojo and Moran are typical in overall HRS quality as a reference for this material.

NURSCO 53

OR

M. LEWIS

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC RMKS	
												1/ 2/	4/ 5/
871340	OWENS	C1017904	SWS	63.2	68.9	0.43	81.5	9.6	57.0	2M	9.45	9.41	
871341		9	SWS	63.2	68.5	0.46	78.9	11.9	55.7	2M	8.82	9.03	Q-FYELD
871342		19	SWS	60.4	65.2	0.42	77.4	10.4	56.2	2M	9.30	9.34	Low FYELD
871343		45	SWS	64.0	71.6	0.46	82.9	10.2	56.4	3M	8.91	8.93	Q-CODI
871344		52	SWS	63.2	68.7	0.45	80.1	10.5	58.1	4M	8.96	9.02	Q-FYELD
871345		6/62	SWS	62.8	70.9	0.45	82.6	10.7	56.0	4M	9.07	9.15	
871346		6/64	SWS	63.2	70.5	0.40	85.2	10.5	57.7	3M	9.17	9.23	
871347		73	SWS	59.6	67.8	0.43	79.7	10.7	56.5	7M	9.12	9.20	Q-FYELD
871348		78	SWS	62.4	67.4	0.42	80.5	9.5	56.2	5M	8.84	8.78	Q- "
871349		81	SWS	62.0	66.4	0.46	76.6	10.3	57.8	6M	8.89	8.92	P- " , Q-CODI
871350		85	SWS	62.4	68.1	0.45	78.9	9.7	57.4	6L	9.29	9.25	Q-FASH&MSCOR
871351		87	SWS	63.2	68.0	0.36	85.4	10.0	58.6	7M	8.75	8.75	Q-FYELD&CODI
871352		91	HWS	59.6	59.6	0.34	76.7	10.9	59.3	4M	8.55	8.62	P- " "Hard"
871353		92	SWS	60.8	66.5	0.39	81.2	10.8	56.9	2M	8.95	9.04	P-FYELD
871354		97	SWS	60.4	64.5	0.38	79.0	9.2	52.9	2L	9.32	9.24	P- "
871355		98	SWS	58.8	67.6	0.40	81.7	11.4	53.9	3M	9.16	9.32	Q- "
871356		102	SWS	58.4	67.1	0.48	76.1	11.3	56.8	3M	8.99	9.13	Q- "
871357		107	HWS	62.0	68.4	0.41	82.6	10.2	60.3	8M	8.75	8.77	P-CODI
871358		108	SWS	62.8	67.3	0.39	81.6	10.1	56.8	3M	8.91	8.92	Q-FYELD&CODI
871359		109	SWS	61.6	66.4	0.43	78.3	10.5	57.7	6M	8.94	8.99	P-FYELD
871360		110	SWS	59.6	57.4	0.43	66.8	11.3	55.8	3M	8.69	8.83	P- " &CODI
871361		6/112	SWS	63.6	70.3	0.44	82.6	10.3	56.8	3M	9.25	9.28	
871362		6/114	SWS	63.2	69.0	0.32	88.4	9.6	57.0	4M	9.24	9.19	
871363		6/116	SWS	62.0	68.5	0.45	79.4	10.9	56.7	4M	9.22	9.32	Q-FYELD
871364		121	SWS	60.8	64.4	0.46	73.6	11.9	55.7	3M	8.80	9.01	P- "

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 10% Protein.4/ Observed Values Corrected to 10% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS: Several of these selections were low in flour yield, which resulted in a low milling score. Others were well below the cookie diameter of Owens, the check variety. See "Remarks" for deficiencies. A few appear equal or better than Owens in overall quality and are footnoted as promising.

NURSCO 54

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
871365	WA6368/ID92	6/ N8602102	HRW	60.3	73.4	0.45	81.6	12.1	3/	5H
871366	KAUKAZ/ID92	N8603505	HRW	61.3	70.8	0.43	79.7	11.9		3M
871367	KVZ/3/P1173467/IT//WSR	N8603602	HRW	60.3	71.6	0.36	85.3	13.3		4H
871368	OR7142/N7500703	N8604601	HRW	60.7	68.4	0.43	76.1	11.8		4M
871369	WA6366/N7602301	N8604903	HRW	60.7	70.7	0.44	80.8	13.4		4H
871370	N7500703/LINDON	N8606101	HRW	61.6	69.5	0.42	80.1	12.1		4M
871371	OMAR MUT/HTN//KVZ	6/ N8606604	HRW	60.5	70.2	0.43	80.3	11.6		6H
871372	286011/WA6820	6/ N8607301	HRW	61.2	71.0	0.40	83.3	12.2		4H
871373	HATTON	C1017772	HRW	62.0	72.3	0.40	84.1	12.0		4H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
871365	WA6368/ID92	N8602102	HRW	68.4	68.3	4.8	985	979	2	Q-FASH
871366	KAUKAZ/ID92	N8603505	HRW	63.7	63.8	2.2	780	786	8	P-FYELD,MT,LVOL&BCRGR
871367	KVZ/3/P1173467/IT//WSR	N8603602	HRW	67.1	65.8	3.6	965	884	4	Q-LVOL&BCRGR
871368	OR7142/N7500703	N8604601	HRW	62.8	63.0	2.6	940	952	3	P-FYELD
871369	WA6366/N7602301	N8604903	HRW	68.8	67.4	4.1	1015	928	3	Q-FYELD
871370	N7500703/LINDON	N8606101	HRW	64.3	64.2	2.6	935	929	4	Q-FYELD&BCRGR
871371	OMAR MUT/HTN//KVZ	N8606604	HRW	66.1	66.5	5.4	955	980	2	Q-FYELD
871372	286011/WA6820	N8607301	HRW	66.6	66.4	4.1	950	938	2	
871373	HATTON	C1017772	HRW	66.3	66.3	3.5	945	945	3	

1/ Observed Values Corrected to 14% Moisture Basis.

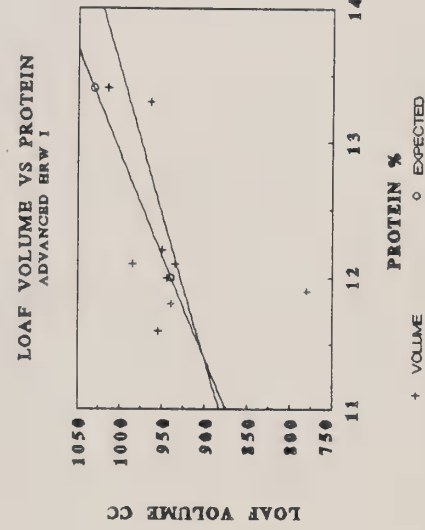
3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: Several of these selections were poorer in flour milling than Hatton. Those that are equal or better than Hatton in overall quality are footnoted as promising. See "Remarks" for major deficiencies.



Statistics	Graph A
Size	9
Total	8470
Mean	941.11111
Maximum	1015
Minimum	780
Standard Dev.	65.420647
Standard Error	21.806882
95% Confidence	42.74149
99% Confidence	56.261757
a0	377.01897
a1	45.985772
a2	0
a3	0
a4	0
a5	0
a6	0
Rval	0.450091

NURSCO 55

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871374	C1017727/N7904302	5/ N8607703	HRW	62.3	72.9	0.39	86.2	11.5	64.0	3H
871375	C1017727/N7904302	5/ N8608403	HRW	61.0	70.9	0.44	80.0	12.2	66.1	3H
871376	C1017727/N7904302	N8608404	HRW	60.9	69.5	0.43	77.6	11.7	65.6	4H
871377	ID178/B7700050	N8608702	HRW	60.2	69.4	0.44	76.6	12.1	64.8	5H
871378	ID178/P1494183	N8608704	HRW	60.8	75.0	0.42	86.9	12.1	64.8	5H
871379	MT7431/N7901901	6/ N8609203	HRW	60.4	70.7	0.45	80.0	12.4	67.5	6H
871380	N7802401/N8000601	N8610202	HRW	60.1	67.0	0.42	75.5	11.6	65.1	3H
871381	CERCO/17271/4/CER/3/GNS//BURT/IT	6/ N8610206	HRW	60.3	69.7	0.43	79.7	11.4	64.8	2H
871382	HATTON	C1017772	HRW	62.4	71.1	0.40	83.3	11.6	66.1	4H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

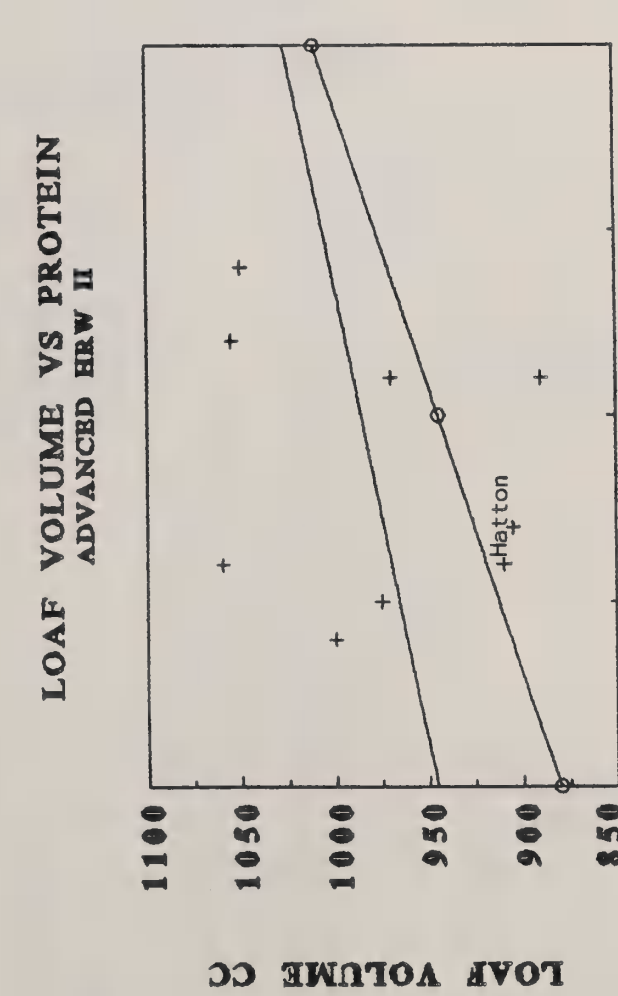
NURSCO 55

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
871374		N8607703	HRW	64.2	64.7	3.2	975	1006		3
871375	C1017727/N7904302	N8608403	HRW	67.0	66.8	3.0	1055	1043		2
871376	C1017727/N7904302	N8608404	HRW	67.0	67.3	3.0	905	924		5 P-BCRGR
871377	ID178/B7700050	N8608702	HRW	66.6	66.5	3.9	970	964		5 P- "
871378	ID178/PI494183	N8608704	HRW	65.6	65.5	4.7	890	884		2 Q to P-LVOL
871379	MT7431/N7901901	N8609203	HRW	69.6	69.2	6.2	1050	1025		2
871380	N7802401/N8000601	N8610202	HRW	66.4	66.8	3.4	1060	1085		3 P-FYELD
871381	CERCO/17271/4/CER/3/GNS//BURT/IT	N8610206	HRW	65.9	66.5	2.8	1000	1037		3 Q- "
871382	HATTON	C1017772	HRW	66.4	66.8	2.3	910	935		4

COMMENTS: Several of these selections are well above expected performance in bread making (see scatter plot) for their protein contents. There is a wide range of quality and collectively a poor correlation with protein (r = .21). See "Remarks" for deficiencies.



Statistics	Graph A
Size	9
Total	8815
Mean	979.444444
Maximum	1060
Minimum	890
Standard Dev.	67.149295
Standard Error	22.383098
95% Confidence	43.870873
99% Confidence	57.748393
a0	501.804348
a1	40.326087
a2	0
a3	0
a4	0
a5	0
a6	0
Rval	0.21467

NURSCO 56

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
871383	WA6817/ID735103	6/N8612103	HRW	60.7	69.9	0.38	83.2	13.0	63.9	3H	65.1
871384	N81016/NE077663	5/N8612803	HRW	61.4	73.7	0.37	89.6	13.2	62.5	3H	64.4
871385		N8613306	HRW	62.5	71.8	0.37	85.7	12.5	62.9	4H	64.6
871386	OMAR MUT/HTN//KVZ	6/N8606603	HW	59.6	67.2	0.40	76.1	11.7	64.9	5H	65.8
871387	N7500901/B7700050	5/N8609906	SWW	60.2	70.2	0.39	80.0	11.6	62.3	2M	61.1
871388	HATTON	C1017772	HRW	62.0	67.7	0.39	75.1	12.7	64.1	4H	65.5
871389	DUSTY	P1486429	SWW	60.7	71.6	0.38	82.6	11.9	59.8	2M	59.4
LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	RMKS
871383	WA6817/ID735103	N8612103	HRW	64.1	3.1	960	895	3		4/	
871384	N81016/NE077663	N8612803	HRW	63.2	3.5	975	901	2			
871385		N8613306	HRW	64.1	4.7	875	844	4			P-LVOL&BCRGR
871386	OMAR MUT/HTN//KVZ	N8606603	HW	66.1	6.1	940	959	2			Q-FYELD
871387	N7500901/B7700050	N8609906	SWW	61.5	1.7	845	869	8	8.62	8.58	Soft WW P-Hard
871388	HATTON	C1017772	HRW	64.8	3.5	950	907	2			
871389	DUSTY	P1486429	SWW	59.5	2.2	915	921	5			

1/ Observed Values Corrected to 14% Moisture Basis.

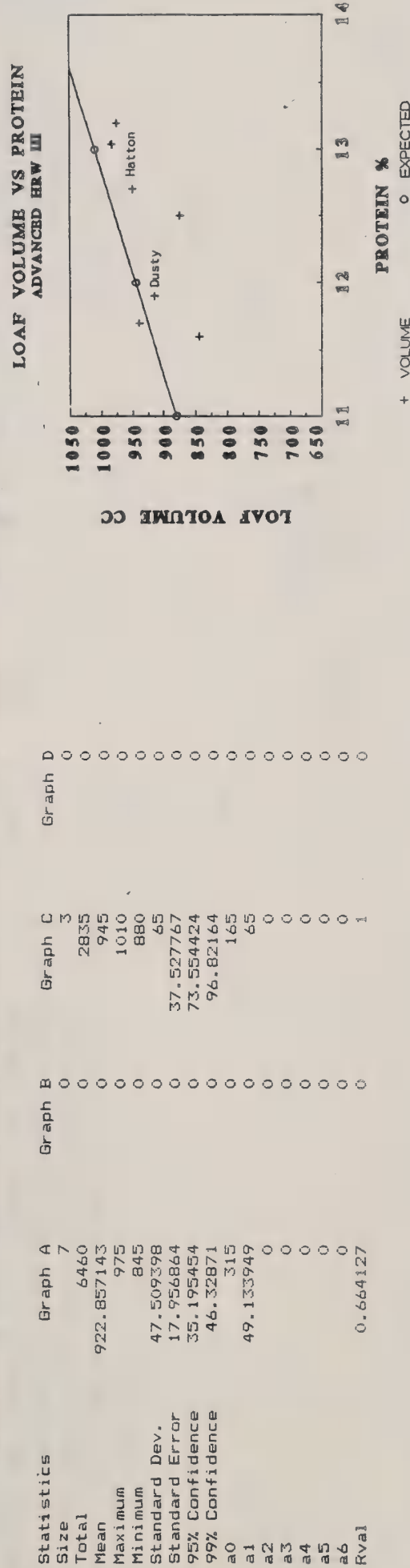
3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: Several of these appear equal or better than Hatton in overall quality. Hatton is atypical in flour yield. See "Remarks". Note N8609906 is a soft endosperm wheat, which appears good in cookie diameter for the high protein.



USDA, SEA AR
WESTERN WHEAT
QUALITY LAB.
PULLMAN, WA.

ADVANCED HRW IV

NURSCO 57

LIND, WA

E. DONALDSON

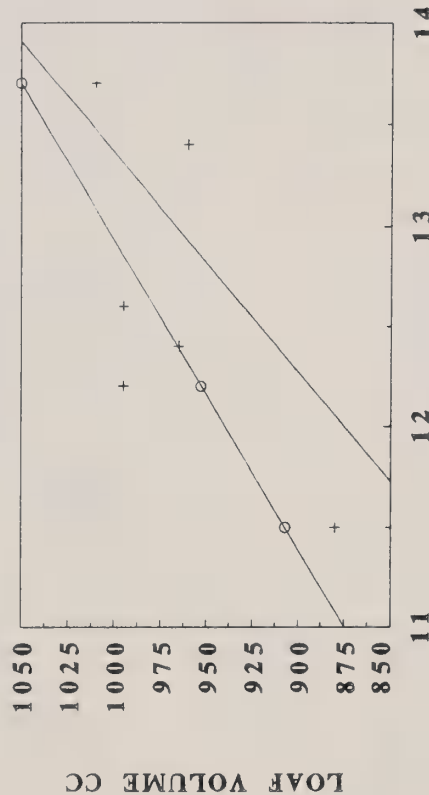
LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/			2/	
871390	C117727/N7900403	N8608301	HRW	60.9	70.3	0.38	81.9	13.7	67.3	3H
871391	N81001/C117772	6/N8612301	HRW	59.9	70.6	0.38	82.3	12.4	66.7	3H
871392	N81014/N74162	N8612502	SWW	59.7	69.4	0.39	79.8	11.8	58.0	1M
871393	N81015/C117727	6/N8612601	HRW	61.4	69.5	0.37	82.0	12.2	66.4	3H
871394	ALLEN #62/C117271	N8601501	HWW	61.3	69.7	0.39	80.4	11.5	65.9	2H
871395	N7406202/PAHA	N8602502	HRW	61.0	68.6	0.38	78.6	13.4	65.8	2H
871396	HATTON	C1017772	HRW	61.8	69.7	0.38	81.4	12.6	67.2	4H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
						3/		4/		
871390	C117727/N7900403	N8608301	HRW	68.2	67.5	2.4	1010	967	3 Q-MTIME&LVOL	
871391	N81001/C117772	N8612301	HRW	65.3	65.9	3.1	965	1002	4 Q-BCRGR	
871392	N81014/N74162	N8612502	SWW	56.5	57.7	1.2	650	722	9 P-MT, LVOL&BCRGR	
871393	N81015/C117727	N8612601	HRW	65.8	66.6	2.6	995	1045	3	
871394	ALLEN #62/C117271	N8601501	HWW	63.1	64.6	1.7	880	973	5 P-MTIME&BCRGR	
871395	N7406202/PAHA	N8602502	HRW	65.9	65.5	2.3	960	935	6 P-FYELD, MTIME&BCRGR	
871396	HATTON	C1017772	HRW	66.5	66.9	3.5	995	1020	3	

- 1/ Observed Values Corrected to 14% Moisture Basis.
3/ Absorption at 14% Moisture Corrected to 13% Protein.
4/ Observed Values Corrected to 13% Protein.
5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

COMMENTS: See "Remarks" for deficiencies of those not footnoted as promising. While the protein level of these were good the loaf volumes obtained were well below "expected" levels (see plot).

LOAF VOLUME VS PROTEIN
ADVANCED HRW IV



Statistics
Size 7
Total 6455
Mean 922.142857
Maximum 1010
Minimum 650
Standard Dev. 127.438127
Standard Error 48.167084
95% Confidence 94.407486
99% Confidence 124.271078
a0 -226.625835
a1 91.796585
a2 0
a3 0
a4 0
a5 0
a6 0
Rval 0.576901

Graph A
7 6455
922.142857
1010
650
127.438127
48.167084
94.407486
124.271078
-226.625835
91.796585
0
0
0
0
0
0.576901

NURSCO 58

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
871397	N7301707/N7602204	<u>6/</u> N8605805	HRW	61.8	69.7	0.37	81.3	12.8	63.5	3H
871398	N81153/MIR808	N8606903	HRW	60.7	67.9	0.39	78.5	12.3	64.6	4H
871399	HATTON	C1017772	HRW	62.1	69.8	0.39	81.5	12.4	65.1	4H
LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
871397	N7301707/N7602204	N8605805	HRW	65.0	64.2	2.8	915	865	4	Q-LVOL&BCRGR
871398	N81153/MIR808	N8606903	HRW	65.6	65.3	3.4	860	841	4	P-FYELD Q-LVOL&BCRGR
871399	HATTON	C1017772	HRW	66.2	65.8	3.7	925	900	2	
<u>1/</u> Observed Values Corrected to 14% Moisture Basis.				<u>5/</u> Particularly Promising Overall Quality Characteristics.						
<u>3/</u> Absorption at 14% Moisture Corrected to 12% Protein.				<u>6/</u> Promising Overall Quality Characteristics.						
<u>4/</u> Observed Values Corrected to 12% Protein.										

COMMENTS: Both of these selections are low in loaf volume and heavy in bread crumb structure.

NURSCO 59

KANSAS

LABNUM	VARIETY	IDNO	CLASS	FASH	FPROT	MABSC	MTYPE	FABS	FPEAK	FSTAB
871400 87B1			HRW	0.39	13.3	62.7	5H	57.4	12.0	26.0
871401 87B2			HRW	0.39	13.0	64.6	5H	55.8	8.0	31.0
871402 87B3			HRW	0.39	11.7	63.9	5H	57.8	6.5	31.0
871403 87C1			HRW	0.39	12.4	64.4	4H	56.9	4.5	7.5
871404 87C2			HRW	0.39	12.1	61.0	6M	54.3	4.5	7.0
871405 87D1			HRW	0.39	13.9	63.8	5H	54.9	5.5	11.5
871406 87D2			HRW	0.39	14.0	63.5	5H	57.4	7.0	23.5
871407 87D3			HRW	0.39	14.2	64.0	5H	58.0	7.5	15.5

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
871400 87B1			HRW	64.7	64.4	5.1	890	871	2	Low LVOL
871401 87B2			HRW	64.8	64.8	4.4	990	990	2	
871402 87B3			HRW	63.3	64.6	4.2	955	1036	2	
871403 87C1			HRW	63.0	63.6	3.1	950	987	3	
871404 87C2			HRW	61.8	62.7	4.0	930	986	2	
871405 87D1			HRW	63.9	63.0	4.0	905	849	8	VP-LVOL,BCRGR
871406 87D2			HRW	65.2	64.2	4.1	1070	1008	5	Q-LVOL, BCRGR
871407 87D3			HRW	65.9	64.7	3.3	975	901	4	Q-LVOL,BCRGR

COMMENTS: These samples were baked in collaboration with the Hard Red Winter Wheat Quality Council, Manhattan, KS. They represent new varietal selections under consideration for release in the Great Plains States. The selections were coded and have a wide range of quality. See "Remarks".

USDA, SEA AR
WESTERN WHEAT
PULLMAN, WA.

STATE HRS

PULLMAN, WA

C.F. KONZAK

NURSCO 60

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
8711408	WAMPUM	C1017691	HRS	62.3	74.9	0.39	90.0	11.6	62.6	3H
8711409	MCKAY	C1017903	HRS	61.4	72.8	0.32	91.4	11.6	63.8	5H
8711410	NORDIC	HS820175	HRS	64.0	74.1	0.33	92.8	10.6	65.0	4H
8711411	WPB 906R	WPB00906	HRS	62.2	72.0	0.32	91.0	12.5	64.5	5H
8711412	SPELLMAN	WA007075	HRS	62.3	73.2	0.33	91.5	11.7	64.3	3H
8711413	NDM00004/NK000751 S82-62	6/ WA007493	HRS	63.4	73.8	0.34	91.7	10.8	65.0	4H
8711414	NDM00004/NK000751 S82-66	6/ WA007494	HRS	63.2	73.6	0.33	91.8	10.9	64.4	4H
8711415	K78560-4 BORAH/WA006389	6/ K8300048	HRS	63.3	75.8	0.29	96.6	10.3	64.5	8M
8711416	K79458-6 NHS1083-74/Y7511507/MN70170	6/ K8300110	HRS	64.7	68.3	0.29	88.5	10.2	63.5	8M
8711417	NK000851/NDM00011 S82-10	KNC000043	HRS	63.5	73.1	0.32	92.1	10.4	62.6	7M
8711418	NK000751/NDM00011 S82-18	6/ KNC000043	HRS	63.6	73.3	0.31	92.5	10.4	62.3	7M
8711419	NK000751/NDM00011 S82-20	6/ KNC000043	HRS	63.5	72.9	0.32	91.9	10.6	62.9	7M
8711420	NK000751/NDM00011 S82-31	6/ KNC000043	HRS	63.4	73.5	0.32	92.4	10.8	62.9	6M
8711421	K78550-2 PROSPUR/WA006389	6/ K8300022	HRS	63.0	71.6	0.28	92.6	10.2	63.6	8M
8711422	K78550-3 PROSPUR/WA006389	K8300023	HRS	61.8	71.7	0.27	92.9	11.1	64.6	5H
8711423	NDM00004/NK000751 S82-63	6/ KNC000030	HRS	63.4	73.4	0.33	92.0	10.7	63.7	6M
8711424	NK000751/NDM00011 S82-01	6/ KNC000043	HRS	63.4	73.0	0.33	91.6	10.7	63.5	6M
8711425	NK000751/NDM00011 S82-12	KNC000043	HRS	62.5	72.6	0.33	90.8	10.7	63.8	6M
8711426	NK000751/NDM00011 S82-13	KNC000043	HRS	63.3	72.0	0.33	90.3	10.5	64.2	6M
8711427	NK000751/NDM00011 S82-16	6/ KNC000043	HRS	63.2	72.8	0.34	90.6	10.7	62.8	6M
8711428	NK000751/NDM00011 S82-17	6/ KNC000043	HRS	63.6	72.6	0.33	91.1	10.6	62.7	6M
8711429	NK000751/NDM00011 S82-32	6/ KNC000043	HRS	63.5	72.3	0.34	90.1	10.7	62.6	6M
8711430	NK000751/NDM00011 S82-34	KNC000043	HRS	63.4	72.6	0.34	90.4	10.7	63.3	6M
8711431	NDM00011/NK000751 S83-02	6/ KNC000042	HRS	63.5	72.7	0.34	90.6	10.8	63.2	6M
8711432	NK000751/NDM00011 S83-02	KNC000043	HRS	63.1	72.2	0.33	90.4	10.7	63.0	6M
8711433	NK000751/NDM00011 S83-31	KNC000043	HRS	63.3	73.2	0.34	91.2	10.9	63.4	3H

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 11% Protein.

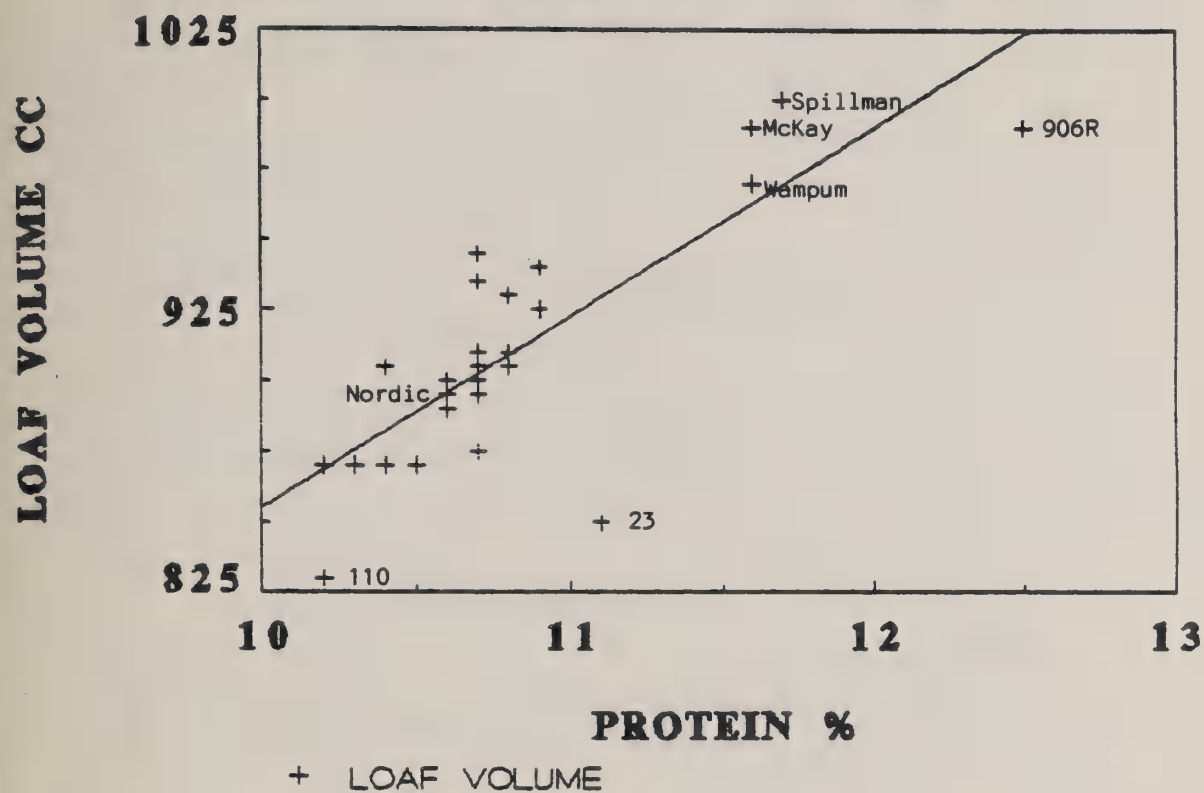
LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
8711408	WAMPUM	C1017691	HRS	63.9	63.3	3.9	970	933	4	
8711409	MCKAY	C1017903	HRS	64.1	63.5	4.6	990	953	2	
8711410	NORDIC	HS820175	HRS	66.3	66.7	3.6	895	920	4	
8711411	WPB 906R	WPB00906	HRS	66.7	65.2	4.2	990	897	2	
8711412	SPILLMAN	WA007075	HRS	65.7	65.0	3.2	1000	957	2	
8711413	NDM00004/NK000751 S82-62	WA007493	HRS	64.5	64.7	3.5	905	917	2	
8711414	NDM00004/NK000751 S82-66	WA007494	HRS	65.0	65.1	4.1	925	931	3	Q-BCRGR
8711415	K78560-4 BORAH/WA006389	K8300048	HRS	65.5	66.2	8.9	870	913	3	
8711416	K79458-6 NHS1083-74/Y7511507/MN70170	K8300110	HRS	63.4	64.2	4.4	830	880	4	Q-FYELD, LVOL&BCRGR
8711417	NK000851/NDM00011 S82-10	KNC000043	HRS	62.7	63.3	3.6	905	942	4	Q-BCRGR
8711418	NK000751/NDM00011 S82-18	KNC000043	HRS	62.4	63.0	3.4	870	907	2	
8711419	NK000751/NDM00011 S82-20	KNC000043	HRS	63.6	63.6	3.5	890	915	2	
8711420	NK000751/NDM00011 S82-31	KNC000043	HRS	63.4	63.6	3.4	910	922	2	
8711421	K78550-2 PROSPUR/WA006389	K8300022	HRS	63.5	64.3	4.8	870	920	2	
8711422	K78550-3 PROSPUR/WA006389	K8300023	HRS	65.4	65.3	4.5	850	844	2	Low LVOL
8711423	NDM00004/NK000751 S82-63	KNC000030	HRS	64.1	64.4	3.6	875	894	2	
8711424	NK000751/NDM00011 S82-01	KNC000043	HRS	63.9	64.2	3.4	895	914	2	
8711425	NK000751/NDM00011 S82-12	KNC000043	HRS	64.2	64.5	3.7	900	919	4	Q-BCRGR
8711426	NK000751/NDM00011 S82-13	KNC000043	HRS	64.4	64.9	3.6	870	901	4	Q-BCRGR
8711427	NK000751/NDM00011 S82-16	KNC000043	HRS	63.2	63.5	3.6	905	924	2	
8711428	NK000751/NDM00011 S82-17	KNC000043	HRS	63.0	63.4	3.2	900	925	3	Q-BCRGR
8711429	NK000751/NDM00011 S82-32	KNC000043	HRS	63.0	63.3	3.2	910	929	2	
8711430	NK000751/NDM00011 S82-34	KNC000043	HRS	63.7	64.0	3.4	935	954	4	Q-BCRGR
8711431	NDM00011/NK000751 S83-02	KNC000042	HRS	63.7	63.9	3.5	930	942	3	Q- "
8711432	NK000751/NDM00011 S83-02	KNC000043	HRS	63.4	63.7	3.4	945	964	4	Q- "
8711433	NK000751/NDM00011 S83-31	KNC000043	HRS	67.0	67.1	3.4	940	946	4	Q- "

COMMENTS: Several of these selections (Footnoted) appear good in overall quality. Others such as the sister selections of KNC00043, S83-02, and

S83-31 (last three samples) are marginal in bread crumb, but probably equal to Wampum which also scored a 4. None of the selections appear as high in protein as the check samples. See plot of loaf volume vs protein on page 2. The slope of the regression is 67.2 cc per % protein, which is quite good.

LOAF VOLUME VS PROTEIN

STATE HARD RED SPRING



Statistics	Graph A
Size	26
Total	23675
Mean	910.576923
Maximum	1000
Minimum	830
Standard Dev.	43.181638
Standard Error	8.468616
95% Confidence	16.598487
99% Confidence	21.849029
a0	183.213542
a1	67.204861
a2	0
a3	0
a4	0
a5	0
a6	0
Rval	0.802448

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

ADVANCED HRS

NURSCO 61

PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
871434	K80401	6/01-K850018	HRS	63.1	71.7	0.28	92.4	10.2	65.1	4M
871435	K80401	6/02-K850018	HRS	63.6	70.0	0.28	90.9	10.4	65.3	4M
871436	K80437	6/03-K850022	HRS	59.6	70.3	0.33	88.6	11.4	65.1	6H
871437	K80447	04-K850023	HRS	60.6	69.5	0.36	86.3	11.8	63.6	3H
871438	K81715	5/10-K850038	HRS	63.7	74.0	0.30	94.0	10.1	63.1	8M
871439	K81752	6/11-K850039	HRS	62.6	73.0	0.32	91.8	10.5	65.2	8M
871440	K81829	6/14-K850040	HRS	63.0	73.1	0.33	91.4	10.3	64.7	4M
871441	K81829	6/15-K850040	HRS	62.8	73.7	0.33	92.1	10.3	63.5	4M
871442	MCKAY	C1017903	HRS	62.2	71.1	0.30	91.1	10.7	63.2	6M

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
871434	K80401	01-K850018	HRS	66.0	66.8	2.9	850	900	3	Q-LVOL
871435	K80401	02-K850018	HRS	66.4	67.0	3.1	860	897	2	Q- "
871436	K80437	03-K850022	HRS	66.2	65.8	5.8	1005	980	2	
871437	K80447	04-K850023	HRS	66.1	65.3	2.9	890	840	4	Q-LVOL&FYELD
871438	K81715	10-K850038	HRS	63.9	64.8	4.2	955	1011	2	
871439	K81752	11-K850039	HRS	65.4	65.9	7.7	865	896	3	Q-LVOL
871440	K81829	14-K850040	HRS	64.7	65.4	2.6	895	938	3	Q-MTIME
871441	K81829	15-K850040	HRS	63.5	64.2	2.9	920	963	4	=McKay
871442	MCKAY	C1017903	HRS	62.6	62.9	4.0	945	964	4	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: Several of these selections are questionable in loaf volume when compared to McKay, however, most were better in crumb grain structure than McKay so they may prove acceptable. See "Remarks".

D. SUNDERMAN

IDAHO (Aberdeen, Twin Falls, & Tetonia)

NURSCO 63

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
						1/		1/	3/		
8711470	MALCOLM-ABERDEEN	ORCW8113	SWW	60.7	71.2	0.41	85.8	8.7	57.3	1M	
8711471	TREASURE-TETONIA	PI468962	SWS	64.1	72.1	0.35	90.8	9.8	56.6	2M	
8711472	BORAH	CI017267	HRS	63.8	69.3	0.27	90.6	12.5	61.3	2H	64.0
8711473	COPPER	PI502644	HRS	63.3	70.8	0.27	92.2	13.0	64.1	4H	66.8
8711474	PONDERA	CI017828	HRS	64.7	70.6	0.32	89.5	14.1	63.1	4H	66.9
8711475	TREASURE-TWIN FALLS	PI468962	SWS	62.6	72.2	0.39	88.4	8.7	54.8	2L	
8711476	BORAH	CI017267	HRS	63.5	72.3	0.35	89.4	11.5	62.7	2H	63.9
8711477	COPPER	PI502644	HRS	62.7	72.1	0.34	89.9	10.7	63.8	4M	64.7
8711478	PONDERA	CI017828	HRS	63.9	68.8	0.36	85.2	10.9	63.3	3M	63.9
8711479	ID339-ABERDEEN	HRW	HRW	62.6	68.4	0.35	85.8	11.5	63.4	3H	65.1
8711480	JEFF	CI017270	HRW	63.7	72.6	0.32	91.3	12.0	64.3	2H	66.0
8711481	MANNING	CI017846	HRW	62.0	70.8	0.32	89.4	10.2	63.7	6M	64.1
8711482	SPRAGUE	CI015376	SWW	60.9	68.9	0.36	86.0	9.7	55.3	1M	
8711483	NEELEY	CI017860	HRW	64.1	70.2	0.34	88.0	10.5	62.6	4M	63.3
8711484	ID339-TETONIA	HRW	HRW	59.1	65.4	0.41	79.3	11.7	64.7	4H	66.6
8711485	JEFF	CI017270	HRW	61.7	67.0	0.36	83.4	11.5	64.9	3H	66.6
8711486	MANNING	CI017846	HRW	60.8	65.7	0.34	83.3	10.0	64.5	4M	65.7
8711487	SPRAGUE	CI015376	SWW	60.0	67.0	0.37	82.6	9.1	57.0	2M	
8711488	NEELEY	CI017860	HRW	61.5	65.0	0.35	81.8	10.5	63.6	6M	64.8

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 63

IDAHO

D. SUNDERMAN

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	RMKS
871470	MALCOLM-ABERDEEN	ORCW8113	SWW						9.47	9.22	Excellent
871471	TREASURE-TETONIA	PI468962	SWS						9.50	9.37	Excellent
871472	BORAH	CI017267	HRS	62.5	1.8	975	882	4			P-MTIME Q-BCRGR
871473	COPPER	PI502644	HRS	64.8	2.5	955	831	2			Q-LVOL
871474	PONDERA	CI017828	HRS	63.8	2.5	1090	898	2			Good
871475	TREASURE-TWIN FALLS	PI468962	SWS						9.56	9.31	Excellent
871476	BORAH	CI017267	HRS	63.4	1.9	950	919	4			P-MTIME QOBCRGR
871477	COPPER	PI502644	HRS	65.0	3.1	985	1004	2			Excellent
871478	PONDERA	CI017828	HRS	64.0	2.1	960	966	4			Q-FYELD, & BCRGR
871479	ID339-ABERDEEN	CI017860	HRW	64.6	3.1	935	904	4			Q- " "
871480	JEFF	CI017270	HRW	65.0	2.5	950	888	2			Good
871481	MANNING	CI017846	HRW	64.9	3.2	955	1005	5			Heavy BCRGR
871482	SPRAGUE	CI015376	SWW						9.36	9.28	Good
871483	NEELEY	CI017860	HRW	63.8	2.8	835	866	3			Fair
871484	ID339-TETONIA		HRW	65.9	3.2	955	912	3			P-FYELD
871485	JEFF	CI017270	HRW	66.1	2.5	895	864	5			Q-FYELD & BCRGR
871486	MANNING	CI017846	HRW	66.7	3.4	855	917	5			P- " "
871487	SPRAGUE	CI015376	SWW						8.96	8.84	Q- " "
871488	NEELEY	CI017860	HRW	65.3	3.1	835	866	5			P-FYELD & BCRGR

COMMENTS: Current spring and winter varieties grown in south and east Idaho. Results indicate a wide variation in quality from one location to the others. See "Remarks" for a general description of faults.

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WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

PRELIMINARY SWS QUALITY

NURSCO 64

PULLMAN, WA

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC	MTYPE	RMKS
					1/	1/	1/	3/	3/	4/	4/		
871489	BEIJING #6/K7905779, WA006153/POTAM	6/K8605006	SWS	63.2	69.9	0.35	87.7	8.6	56.5	9.01	8.97	6L Q-FYELD	
871490	K7905617/K7905616, LIFN*2-N1220/	6/K8605012	SWS	61.2	69.5	0.37	85.9	9.7	57.3	9.20	9.28	2M Q-	"
871491	K795753/K7905798, WA006153/POTAM	6/K8605021	SWS	63.2	71.3	0.36	89.1	9.1	57.0	9.10	9.11	3L	
871492	K7905769/K7600672	6/K8605025	SWS	63.2	70.3	0.37	87.3	9.3	56.8	9.24	9.27	4L	
871493	K7905779/NAPB103-77	6/K8605034	SWS	63.2	71.0	0.36	88.4	8.5	57.0	9.07	9.02	5L	
871494	K7905936/K7905737	6/K8605035	SWS	61.2	70.0	0.34	88.8	8.3	58.0	9.36	9.29	5L	
871495	K7906031/K7905631	6/K8605036	SWS	62.4	70.6	0.37	87.2	8.3	57.5	9.45	9.37	4L	
871496	K80025/ID144	6/K8605043	SWS	61.2	71.9	0.38	88.6	8.2	57.3	9.29	9.20	4M	
871497	K80063/K80187	6/K8605054	SWS	63.6	70.8	0.34	89.6	9.0	59.8	9.17	9.17	2M	
871498	K80063/K80187	5/K8605057	SWS	63.2	71.1	0.33	90.7	9.4	57.6	9.35	9.39	2M	
871499	K80184/K7905769	5/K8605068	SWS	64.0	70.7	0.34	89.6	8.6	56.9	9.35	9.31	4L	
871500	K7905798/SNYT273-493	6/K8605094	SWS	64.0	69.8	0.36	86.9	9.0	56.9	9.00	9.00	6L Q-FYELD	
871501	K7905798/SNYT273-493	K8605095	SWS	63.2	69.7	0.36	86.9	8.6	56.5	8.92	8.88	4L Q-	" & CODI
871502	K7905798/SNYT273-493	6/K8605098	SWS	63.2	70.5	0.34	89.2	9.9	58.1	9.31	9.41	1M	
871503	K7905798/SNYT273-493	K8605099	SWS	62.8	70.6	0.34	89.3	8.7	55.9	8.92	8.89	3L Q-CODI	
871504	K80413/ID167	5/K8605100	SWS	62.8	73.1	0.33	92.9	9.2	57.9	9.45	9.47	4L Outstanding CODI	"
871505	K80413/ID167	5/K8605101	SWS	63.2	71.8	0.34	91.1	8.4	55.4	9.74	9.67	2L	
871506	K80413/ID167	6/K8605102	SWS	62.4	71.5	0.33	91.0	8.6	57.5	9.25	9.21	3L	
871507	K80421/WA6307	6/K8605105	SWS	60.4	71.5	0.37	88.8	9.5	56.1	9.02	9.08	3M	
871508	K80421/WA6307	6/K8605108	SWS	63.6	70.9	0.35	88.9	9.6	57.3	9.52	9.59	2M Outstanding CODI	
871509	K80428/ID167	5/K8605117	SWS	64.4	71.4	0.34	90.4	9.8	55.8	9.54	9.63	3M	"
871510	SRI 5221/WA6711	5/K8605123	SWS	63.2	73.5	0.36	91.4	9.0	55.9	9.39	9.39	3M	"
871511	WA6921/K79299	5/K8605139	SWS	59.6	71.0	0.38	87.1	9.5	57.0	9.44	9.49	2M	"
871512	K79299/K7905328	5/K8605142	SWS	62.4	72.5	0.31	93.5	9.4	56.4	9.10	9.14	2M	
871513	K79299/K7905328	6/K8605143	SWS	62.4	71.3	0.32	91.7	8.4	57.7	9.24	9.17	2L	
871514	WAVERLY	C1017911	SWS	62.8	72.5	0.35	91.4	8.2	57.4	9.29	9.20	3L	
871515	EDWALL	P1477919	SWS	62.0	71.0	0.33	90.4	7.0	55.5	9.25	9.03	2L	
871516	PENAWAWA	P1495915	SWS	62.8	69.5	0.37	86.3	8.1	56.0	9.30	9.20	3L	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

4/ Observed Values Corrected to 9% Protein.

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

COMMENTS: This group of selections have a large number of selections with exceptional quality, which is equal to or superior to any of the check varieties. Note "Remarks".

NURSCO 65

PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871517	K74102/K80415	K8500239	HRS	63.2	71.3	0.33	89.7	9.9	63.0	4M
871518	K74102/K80415	K8500240	HRS	64.0	70.5	0.30	90.4	10.0	62.4	6M
871519	K74102/K80415	K8500241	HRS	62.8	70.0	0.36	86.9	10.1	62.2	6M
871520	K74102/K80415	K8500242	HRS	63.6	72.5	0.36	89.4	10.3	63.6	5H
871521	K74102/K80415	K8500244	HRS	64.0	71.9	0.35	89.3	10.1	63.7	5H
871522	K74102/K80415	K8500245	HRS	64.8	72.4	0.33	90.9	10.4	61.8	6M
871523	NB78410551/WA6510	K8500303	HRS	64.0	69.4	0.37	85.3	11.0	61.7	4M
871524	NHS10001-75/HP188	K8500310	HRS	64.4	71.9	0.32	91.0	11.3	60.5	3M
871525	NHS10001-75/HP188	K8500311	HRS	64.8	71.7	0.32	90.7	10.0	60.8	3M
871526	MAGNIF 41 MUT/WA6307	6/ K8500429	HRS	62.4	71.7	0.31	91.0	10.3	62.1	8M
871527	MAGNIF 41/WA6705	K8500433	HRS	61.2	71.4	0.32	90.1	12.3	63.1	4H
871528	MAGNIF 41/WA6307	6/ K8500437	HRS	63.2	70.9	0.35	88.4	11.1	63.8	4H
871529	NZG 6101-6/ID167	6/ K8500442	HRS	63.6	71.8	0.33	90.3	9.9	60.8	5M
871530	NZG 6101-6/ID167	6/ K8500445	HRS	63.6	71.7	0.32	90.5	10.3	61.0	4M
871531	NZG6001/ID167	5/ K8500447	HRS	64.0	72.4	0.34	90.2	10.1	61.1	4M
871532	SRI 5221/W/S74330	K8500460	HRS	61.6	72.2	0.31	91.5	11.4	64.1	4H
871533	SRI 5232/W/S74330	6/ K8500465	HRS	64.4	72.5	0.34	90.3	9.3	61.5	6M
871534	SRI 5232/W/S74330	K8500466	HRS	64.4	72.1	0.34	89.9	9.1	61.8	7M
871535	V880-419/NK761011	5/ K8500479	HRS	63.6	71.2	0.31	90.5	10.0	61.8	6M
871536	K81493/K81519	6/ K8500596	HRS	63.6	70.0	0.31	89.4	11.8	62.1	6M
871537	K7905779/K7500399	5/ K8600005	HRS	64.0	72.7	0.30	92.6	10.2	61.6	6M
871538	K7905617/SNYT 273-489	K8600023	HRS	62.8	72.0	0.29	92.3	11.0	62.9	4M
871539	K7905623/SNYT 372-489	K8600025	HRS	62.8	70.3	0.36	87.1	9.7	64.2	4H
871540	K80058/K7905530	6/ K8600026	HRS	63.2	71.1	0.29	91.7	12.3	65.9	4H
871541	WAMPUM	C1017691	HRS	63.6	71.2	0.34	89.1	10.2	63.7	6M
871542	MCKAY	C1017903	HRS	64.0	71.9	0.31	91.5	10.2	63.6	7M
871543	SPILLMAN	WA007075	HRS	63.2	69.3	0.31	88.3	11.1	61.1	4M
871544	906R	WPB00906	HRS	64.4	69.7	0.31	89.0	11.7	63.6	5H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 65

PULLMAN, WA

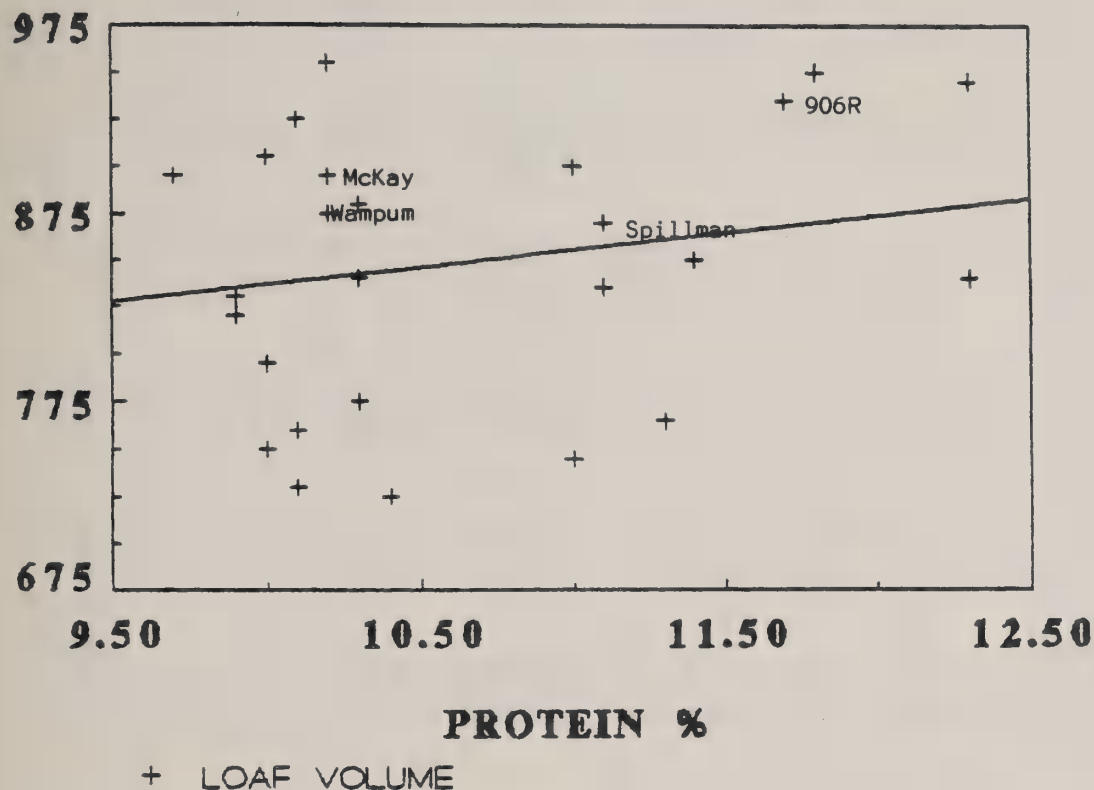
C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/ 4/			4/		
871517	K74102/K80415	K8500239	HRS	63.6	64.7	2.4	820	888	5Q-MTIME, LVOL&BCRGR	
871518	K74102/K80415	K8500240	HRS	63.1	64.1	3.2	795	857	3P-LVOL	
871519	K74102/K80415	K8500241	HRS	63.0	63.9	3.3	760	816	3P- "	
871520	K74102/K80415	K8500242	HRS	64.6	65.3	4.1	775	818	2P- " (G-FYELD&BCRGR)	
871521	K74102/K80415	K8500244	HRS	64.5	65.4	4.3	730	786	3VP-LVOL	
871522	K74102/K80415	K8500245	HRS	62.9	63.5	3.5	725	762	3VP- "	
871523	NB78410551/WA6510	K8500303	HRS	63.4	63.4	2.3	745	745	3VP- " &MTIME	
871524	NHS10001-75/HP188	K8500310	HRS	62.0	61.7	1.7	765	746	5VP- " ,BCRGR&MTIME	
871525	NHS10001-75/HP188	K8500311	HRS	61.0	62.0	1.8	750	812	6VP- " "	
871526	MAGNIF 41 MUT/WA6307	K8500429	HRS	62.1	62.8	5.1	840	883	2Q-LVOL	
871527	MAGNIF 41/WA6705	K8500433	HRS	66.1	64.8	3.9	840	759	2P- "	
871528	MAGNIF 41/WA6307	K8500437	HRS	65.6	65.5	4.5	835	829	2Q-P-LVOL	
871529	NZG 6101-6/ID167	K8500442	HRS	61.4	62.5	2.8	830	898	2 "	
871530	NZG 6101-6/ID167	K8500445	HRS	62.0	62.7	2.9	880	923	4Q-BCRGR	
871531	NZG86001/ID167	K8500447	HRS	61.9	62.8	4.2	925	981	2 "	
871532	SRI 5221/W/S74330	K8500460	HRS	66.2	65.8	4.0	850	825	2P-LVOL	
871533	SRI 5232/W/S74330	K8500465	HRS	61.5	63.2	4.5	865	970	4Q-BCRGR	
871534	SRI 5232/W/S74330	K8500466	HRS	61.6	63.5	4.6	850	968	4Q- "	
871535	V880-419/NK761011	K8500479	HRS	60.5	61.5	2.8	905	967	2 "	
871536	K81493/K81519	K8500596	HRS	64.6	63.8	4.8	950	900	2Q-LVOL	
871537	K7905779/K7500399	K8600005	HRS	62.5	63.3	5.1	955	1005	2 "	
871538	K7905617/SNYT 273-489	K8600023	HRS	63.6	63.6	2.2	900	900	3Q-MTIME&LVOL	
871539	K7905623/SNYT 372-489	K8600025	HRS	63.1	64.4	4.2	870	951	5Q-BCRGR ? Low Prot.	
871540	K80058/K7905530	K8600026	HRS	68.9	67.6	4.9	945	864	2Q-LVOL	
871541	WAMPUM	C1017691	HRS	63.6	64.4	4.0	875	925	3 "	
871542	MCKAY	C1017903	HRS	64.5	65.3	5.3	895	945	3 "	
871543	SPILLMAN	WA007075	HRS	62.9	62.8	3.3	870	864	2 "	
871544	906R	WPB00906	HRS	66.0	65.3	5.3	935	892	2 "	

COMMENTS: Common fault with several of these selections was a low loaf volume. Selection #'s K8500447, K8500497, and K8600005 appear outstanding in overall quality. Others footnoted as promising may have minor deficiencies (See "Remarks"). There was considerable variation in protein within the nursery. See page 2 for a plot of the loaf volumes vs protein data. Correlation is only $r = .22$ with a regression slope of 18.6 cc/% prot., which is very poor.

LOAF VOLUME VS PROTEIN

HARD RED SPRING 82 QUALITY/87



Statistics	Graph A
Size	28
Total	23705
Mean	846.607143
Maximum	955
Minimum	725
Standard Dev.	69.669239
Standard Error	13.166249
95% Confidence	25.805847
99% Confidence	33.968922
a0	650.138529
a1	18.641549
a2	0
a3	0
a4	0
a5	0
a6	0
Rval	0.222243

NURSCO 66

PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871545	K80058/K7905530	5/ K8600028	HRS	64.0	70.4	0.32	89.3	11.4	63.7	4H
871546	K80003/WA6711	6/ K8600042	HRS	62.4	69.5	0.32	88.5	11.1	64.3	7H
871547	K80003/WA6711	K8600044	HRS	62.0	70.5	0.34	88.0	10.7	62.0	6M
871548	K80003/WA6711	6/ K8600045	HRS	63.2	71.3	0.31	90.9	12.2	64.1	4H
871549	K80003/WA6711	6/ K8600046	HRS	63.6	72.7	0.31	92.1	11.0	64.7	5H
871550	K80003/WA6711	6/ K8600047	HRS	64.4	69.4	0.34	87.1	10.3	64.0	5H
871551	K80295/ID167	K8600055	HRS	62.8	69.8	0.32	88.4	10.1	62.1	8M
871552	K80295/ID167	K8600056	HRS	63.6	72.4	0.29	92.7	9.7	63.9	8M
871553	K80295/ID167	K8600058	HRS	64.0	71.6	0.30	91.7	10.5	63.2	8M
871554	K80295/ID167	6/ K8600060	HRS	62.0	71.1	0.31	90.3	9.9	63.4	6M
871555	K80296/NHS7664	6/ K8600061	HRS	64.4	69.2	0.31	88.3	9.8	64.0	4M
871556	K80296/NK761011	5/ K8600069	HRS	64.0	71.9	0.33	90.4	11.1	65.2	4H
871557	K80296/NK761011	K8600070	HRS	62.8	71.7	0.30	91.7	10.8	62.6	8M
871558	K80296/NK761011	6/ K8600072	HRS	61.6	71.8	0.31	91.3	11.0	63.3	6H
871559	K80296/NK761011	K8600074	HRS	64.8	71.7	0.28	92.7	10.8	61.5	8M
871560	K80296/NK761011	K8600075	HRS	63.6	71.4	0.33	89.5	11.6	62.6	2H
871561	K80296/NK761011	6/ K8600076	HRS	64.0	70.7	0.32	89.7	11.1	67.0	5H
871562	K80296/NK761011	5/ K8600078	HRS	64.0	71.6	0.32	90.5	10.9	64.7	4H
871563	K80296/NK761011	K8600079	HRS	62.8	72.6	0.30	92.4	9.8	63.1	8M
871564	K80296/NK761011	K8600080	HRS	64.0	71.0	0.33	89.5	9.9	62.3	6M
871565	K80296/NK761011	K8600083	HRS	63.6	70.4	0.31	89.8	11.3	67.5	5H
871566	K80296/NK761011	6/ K8600085	HRS	63.2	70.8	0.34	88.6	10.3	64.5	4H
871567	K80296/NK761011	K8600086	HRS	62.8	72.0	0.34	89.6	10.5	63.0	3M
871568	K80296/NK761011	K8600087	HRS	62.0	69.8	0.35	87.2	9.0	62.8	4M
871569	K80296/NK761011	K8600088	HRS	60.4	69.9	0.34	87.6	10.1	63.7	6M
871570	K80296/NK761011	K8600089	HRS	61.2	67.3	0.34	84.7	10.5	63.6	6M
871571	WAMPUM	C1017691	HRS	61.2	70.1	0.33	88.2	10.2	63.5	6M
871572	MCKAY	C1017903	HRS	64.0	70.8	0.29	91.0	9.9	62.4	8M
871573	SPILLMAN	WA007075	HRS	63.2	71.2	0.32	90.3	11.0	63.8	3H
871574	906R	WPB00906	HRS	64.0	69.4	0.31	88.4	11.4	63.6	5H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

C.F. KONZAK

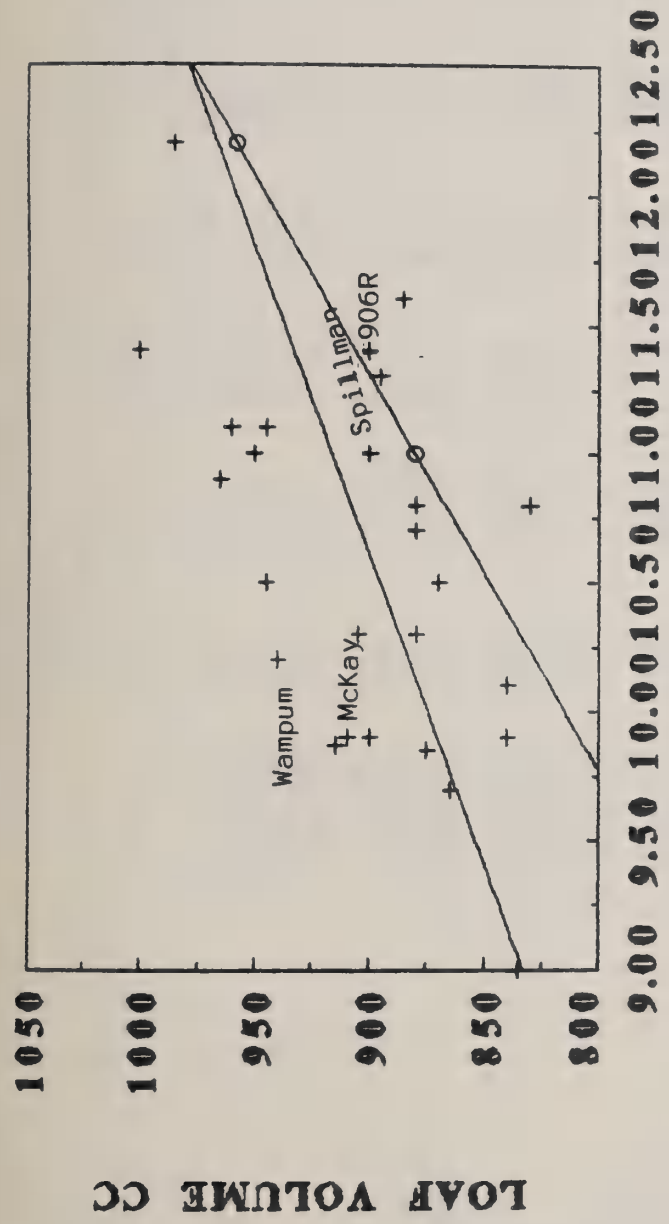
PULLMAN, WA

NURSCO 66

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
871545	K80058/K7905530	K8600028	HRS	65.8	65.4	4.5	1000	975	2	2 Note: Long Mix 4 Q-BCRGR 2 3
871546	K80003/WA6711	K8600042	HRS	66.1	66.0	8.1	960	954	2	
871547	K80003/WA6711	K8600044	HRS	64.4	64.7	4.0	880	899	2	
871548	K80003/WA6711	K8600045	HRS	67.0	65.8	3.6	985	911	2	
871549	K80003/WA6711	K8600046	HRS	64.9	64.9	4.0	950	950	3	
871550	K80003/WA6711	K8600047	HRS	65.0	65.7	4.3	905	948	3	3 P-LVOL Q-BCRGR 4 Q-BCRGR 4 Q-BCRGR 3
871551	K80295/ID167	K8600055	HRS	62.9	63.8	5.5	765	821	4	
871552	K80295/ID167	K8600056	HRS	64.3	65.6	4.8	865	946	4	
871553	K80295/ID167	K8600058	HRS	64.4	64.9	4.0	870	901	4	
871554	K80295/ID167	K8600060	HRS	64.0	65.1	3.5	900	968	3	
871555	K80296/NHS7664	K8600061	HRS	64.5	65.7	2.4	915	989	3	3 Q-MTIME 2 4 Q-LVOL&BCRGR 2 4 Q-BCRGR
871556	K80296/NK761011	K8600069	HRS	67.0	66.9	3.6	960	954	2	
871557	K80296/NK761011	K8600070	HRS	64.1	64.3	5.1	830	842	4	
871558	K80296/NK761011	K8600072	HRS	65.0	65.0	6.6	900	900	2	
871559	K80296/NK761011	K8600074	HRS	63.0	63.2	4.4	880	892	4	
871560	K80296/NK761011	K8600075	HRS	63.9	63.3	1.7	885	848	2	2 Q-LVOL 2 2 5 Q-P-BCRGR 4 Q-BCRGR
871561	K80296/NK761011	K8600076	HRS	68.8	68.7	5.7	945	939	2	
871562	K80296/NK761011	K8600078	HRS	65.3	65.4	3.3	965	971	2	
871563	K80296/NK761011	K8600079	HRS	63.6	64.8	4.7	875	949	5	
871564	K80296/NK761011	K8600080	HRS	62.9	64.0	3.4	840	908	4	
871565	K80296/NK761011	K8600083	HRS	69.5	69.2	4.5	895	876	2	2 Q-LVOL 3 2 P-MTIME 2 4 Q-BCRGR
871566	K80296/NK761011	K8600085	HRS	65.5	66.2	3.4	880	923	3	
871567	K80296/NK761011	K8600086	HRS	63.2	63.7	2.0	870	901	2	
871568	K80296/NK761011	K8600087	HRS	62.5	64.5	3.0	835	959	2	
871569	K80296/NK761011	K8600088	HRS	64.5	65.4	3.4	840	896	4	
871570	K80296/NK761011	K8600089	HRS	64.8	65.3	2.6	945	976	2	2 P-FYELD 2 3 3 3
871571	WAMPUM	C1017691	HRS	63.4	64.2	3.6	940	990	2	
871572	MCKAY	C1017903	HRS	63.0	64.1	4.6	910	978	3	
871573	SPILLMAN	WA007075	HRS	65.5	65.5	3.0	900	900	3	
871574	906R	WPB00906	HRS	65.7	65.3	4.2	900	875	3	

COMMENTS: The checks, Wampum and McKay, were larger in loaf volume than normal and significantly more than Spillman and 906R. Several of the selections appear better than any of the check varieties in overall quality. See page 2 for a plot of the loaf volumes as compared to checks and long term average "expected" line. See "Remarks" for questionable and/or major deficiencies.

LOAF VOLUME VS PROTEIN
HARD RED SPRING #1 QUALITY/87



PROTEIN %

+ VOLUME o EXPECTED

Statistics	Graph A
Size	30
Total	26990
Mean	899.666667
Maximum	1000
Minimum	765
Standard Dev.	51.460285
Standard Error	9.39532
95% Confidence	18.414826
99% Confidence	24.239925
a0	457.255705
a1	41.734258
a2	0
a3	0
a4	0
a5	0
a6	0
Rval	0.554265

NURSCO 67

PULLMAN, WA

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
871575	K80297/WA6307	K8600092	HRS	62.0	70.7	0.34	88.4	9.4	61.4	8M
871576	K80343/WA6307	<u>6/</u> K8600098	HRS	61.2	69.3	0.34	86.9	10.4	62.6	7M
871577	K80343/WA6307	<u>6/</u> K8600099	HRS	63.2	69.7	0.34	87.6	10.3	62.4	6M
871578	K80343/WA6307	K8600100	HRS	62.0	69.6	0.34	87.5	10.2	62.8	6M
871579	K80343/WA6307	K8600101	HRS	63.2	70.4	0.34	88.2	9.7	62.7	6M
871580	K80343/WA6307	K8600102	HRS	62.4	69.7	0.33	88.0	10.0	61.4	6M
871581	K80343/WA6307	K8600103	HRS	63.2	69.2	0.32	87.9	9.9	62.8	6M
871582	C1017903/MEX22A-162M	K8600124	SRS	63.2	66.3	0.35	83.2	9.0	61.6	4M
871583	C1017903/MEX22A-162M	K8600126	SRS	63.6	64.1	0.31	83.0	9.8	61.3	4M
871584	C1017903/MEX22A-5074M	<u>6/</u> K8600130	HRS	64.4	71.8	0.28	92.5	10.3	62.8	8M
871585	K7900821/WPB00906	<u>5/</u> K8600134	HRS	62.4	71.8	0.33	90.1	10.7	62.3	6M
871586	K7900821/WPB00906	<u>6/</u> K8600136	HRS	63.2	71.3	0.27	92.7	11.1	61.7	8M
871587	K7900821/WPB00906	K8600139	HRS	62.4	71.2	0.34	88.8	10.3	62.4	4M
871588	K7900821/WPB00906	<u>6/</u> K8600140	HRS	62.8	72.1	0.31	91.7	11.1	61.7	6M
871589	NK000751/MEX22A-4353	<u>6/</u> K8600145	HRS	64.8	71.6	0.32	90.3	10.2	64.8	4H
871590	NK000751/MEX22A-4353	K8600149	HRS	63.6	71.2	0.32	89.8	8.9	62.1	3M
871591	NK000751/MEX22A-4353	K8600152	HRS	63.2	71.5	0.29	92.1	11.3	61.5	3M
871592	NK000751/MEX22A-4353	<u>6/</u> K8600155	HRS	64.8	71.0	0.30	91.0	10.0	63.2	6M
871593	NK000751/MEX22A-4353	K8600156	HRS	63.2	69.2	0.35	86.6	9.0	62.2	4M
871594	NK000751/PC 0671	<u>5/</u> K8600161	HRS	63.2	70.0	0.30	89.8	10.3	64.1	4H
871595	NK000751/PC 0671	K8600162	HRS	64.8	69.1	0.27	90.5	10.8	62.6	4M
871596	NK000751/PC 0671	<u>6/</u> K8600164	HRS	64.8	69.5	0.28	90.3	10.1	62.8	6M
871597	NK000751/PC 0671	<u>6/</u> K8600165	HRS	65.6	71.5	0.28	92.2	10.5	63.5	4H
871598	NK000751/PC 0671	K8600166	HRS	64.4	69.4	0.28	90.3	10.4	62.3	3M
871599	WAMPUM	C1017691	HRS	64.0	70.9	0.32	89.7	10.4	62.6	6M
871600	MCKAY	C1017903	HRS	63.6	71.6	0.28	92.6	10.3	61.7	8M
871601	SPILLMAN	WA007075	HRS	62.8	71.5	0.30	91.3	11.4	63.0	3H
871602	906R	WPB00906	HRS	63.6	69.7	0.30	89.6	11.9	61.8	5H

1/ Observed Values Corrected to 14% Moisture Basis.5/ Particularly Promising Overall Quality Characteristics.3/ Absorption at 14% Moisture Corrected to 10% Protein.6/ Promising Overall Quality Characteristics.4/ Observed Values Corrected to 10% Protein.

NURSCO 67

PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
871575	K80297/WA6307	K8600092	HRS	62.5	63.1	4.8	765	802	6 P-LVOL&BCRGR	
871576	K80343/WA6307	K8600098	HRS	62.7	62.3	4.5	930	905	2 Q-FYELD	
871577	K80343/WA6307	K8600099	HRS	62.4	62.1	3.5	905	886	2 Q- "	
871578	K80343/WA6307	K8600100	HRS	61.7	61.5	3.6	850	838	3 Q- " &BCRGR	
871579	K80343/WA6307	K8600101	HRS	61.1	61.4	4.3	849	868	4 Q-BCRGR	
871580	K80343/WA6307	K8600102	HRS	61.6	61.6	4.5	895	895	4 Q-FYELD&BCRGR	
871581	K80343/WA6307	K8600103	HRS	61.9	62.0	4.7	870	876	4 Q- "	
871582	C1017903/MEX22A-162M	K8600124	SRS	58.3	59.3	3.5	855	917	6 P- "	
871583	C1017903/MEX22A-162M	K8600126	SRS	58.8	59.0	4.0	875	887	4 P- " Q- "	
871584	C1017903/MEX22A-5074M	K8600130	HRS	62.8	62.5	5.0	945	926	3	
871585	K7900821/WPB00906	K8600134	HRS	62.7	62.0	4.3	955	912	2	
871586	K7900821/WPB00906	K8600136	HRS	63.0	61.9	4.1	920	852	2	
871587	K7900821/WPB00906	K8600139	HRS	62.9	62.6	2.4	880	861	4 Q-MTIME&BCRGR	
871588	K7900821/WPB00906	K8600140	HRS	63.0	61.9	3.4	905	837	2	
871589	NK000751/MEX22A-4353	K8600145	HRS	65.7	65.5	3.9	900	888	2	
871590	NK000751/MEX22A-4353	K8600149	HRS	61.2	62.3	2.6	750	818	8 P-MTIME&BCRGR	
871591	NK000751/MEX22A-4353	K8600152	HRS	63.5	62.2	2.1	855	774	2 P-MTIME&LVOL	
871592	NK000751/MEX22A-4353	K8600155	HRS	63.9	63.9	3.3	860	860	2	
871593	NK000751/MEX22A-4353	K8600156	HRS	61.9	62.9	3.2	775	837	8 Q-FYELD P-BCRGR	
871594	NK000751/PC 0671	K8600161	HRS	65.1	64.8	3.5	945	926	1	
871595	NK000751/PC 0671	K8600162	HRS	64.1	63.3	3.1	840	790	2 P-LVOL	
871596	NK000751/PC 0671	K8600164	HRS	63.6	63.5	3.4	875	869	1	
871597	NK000751/PC 0671	K8600165	HRS	65.7	65.2	3.9	900	869	1	
871598	NK000751/PC 0671	K8600166	HRS	63.4	63.0	2.9	765	740	6 P-LVOL&BCRGR	
871599	WAMPUM	C1017691	HRS	62.7	62.3	2.9	940	915	1	
871600	MCKAY	C1017903	HRS	63.7	63.4	4.3	955	936	2	
871601	SPILLMAN	WA007075	HRS	65.1	63.7	3.3	920	833	2	
871602	906R	WPB00906	HRS	65.4	63.5	4.3	950	832	1	

COMMENTS: Several of these selections appear about equal to the mean of the check varieties and are footnoted as promising. See "Remarks" for deficiencies.

NURSCO 68

PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871603	NK000751/PC 0671	K8600167	HRS	64.8	68.7	0.28	89.5	9.8	63.1	4M
871604	NK000751/PC 0671	K8600168	HRS	64.0	69.0	0.27	90.2	10.3	64.6	6M
871605	NK000751/PC 0671	K8600169	HRS	64.4	69.3	0.29	89.7	10.1	64.8	4M
871606	NK000751/PC 0671	K8600170	HRS	64.8	68.8	0.28	89.7	9.7	64.0	6M
871607	NK000751/PC 0671	K8600171	HRS	64.4	68.9	0.28	89.9	9.8	63.0	4M
871608	NK000751/PC 0671	K8600174	SRS	63.2	68.4	0.29	88.5	10.5	62.0	3M
871609	APRIL BEARDED/KARCAGI M7K	K8600186	SRS	63.6	67.0	0.29	87.1	10.4	60.9	3M
871610	APRIL BEARDED/KARCAGI M7K	K8600187	SRS	63.6	67.7	0.28	88.3	9.9	61.2	3M
871611	CORNERSTONE(WHITE)/ID185//K79251	K8600195	SRS	62.0	67.5	0.29	87.8	7.9	58.8	5L
871612	ID000190/K7905138	6/ K8600196	SWS	63.2	71.1	0.32	91.1	9.5	60.8	4L
871613	KD000190/K7905317	5/ K8600214	SWS	64.4	70.4	0.32	90.3	10.2	59.3	1M
871614	ID000190/K7905658	6/ K8600222	SWS	64.4	69.2	0.34	87.6	10.3	61.0	3M
871615	ID000190/K7905658	6/ K8600223	SWS	63.6	71.1	0.33	90.5	9.9	59.1	4L
871616	ID000190/K79291	6/ K8600224	SWS	62.8	69.7	0.33	88.7	9.8	60.4	4M
871617	ID000229/C1017859	6/ K8600238	SWS	63.6	68.3	0.32	87.9	9.8	61.2	2M
871618	ID000229/C1017859	K8600239	SWS	62.8	68.0	0.31	87.7	9.9	60.5	2M
871619	ID000240/ID000232	K8600243	HRS	62.0	69.7	0.29	89.9	10.4	59.9	3M
871620	K7807010/ID000190	6/ K8600245	SWS	63.6	69.3	0.32	88.7	9.2	59.3	2M
871621	K7807010/ID000190	6/ K8600248	SWS	62.4	69.1	0.32	88.8	9.6	60.5	2M
871622	K7807010/ID000190	5/ K8600254	SWS	61.2	69.4	0.33	88.7	9.6	57.3	6L
871623	K7807010/WA006826	K8600258	SWS	61.6	68.5	0.32	87.6	8.7	57.0	3L
871624	WA006832/C1017347	6/ K8600264	SWS	61.2	70.0	0.34	88.4	10.0	57.4	3M
871625	WAVERLY IA/K82344	6/ K8600271	HWS	61.6	70.3	0.33	89.6	10.1	58.7	2M
871626	WAVERLY IA/K82344	6/ K8600272	HWS	61.6	69.7	0.31	90.0	10.1	58.4	2M
871627	WAVERLY IA/K82344	6/ K8600273	HWS	61.6	69.9	0.31	90.2	10.3	58.5	2M
871628	WAVERLY IB/K82385	6/ K8600274	SWS	62.4	69.8	0.30	90.6	9.3	57.7	2M
871629	K78584/NK751	8600279	SRS	62.0	71.9	0.31	91.3	10.1	59.9	8M
871630	K82229/K78584-2	8600280	HRS	63.6	72.4	0.33	90.6	10.6	62.6	2H
871631	WAMPUM	C1017691	HRS	63.2	70.9	0.32	89.6	10.5	62.7	6M
871632	MCKAY	C1017903	HRS	63.6	71.7	0.29	92.3	10.4	61.0	8M
871633	SPILLMAN	WA007075	HRS	62.8	71.3	0.30	91.1	11.6	63.2	3H
871634	906R	WPB00906	HRS	64.0	70.3	0.30	90.3	11.9	62.0	5H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 68

PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
871603	NK000751/PC 0671	K8600167	HRS	64.1	64.3	3.2	815	827	4Q-FYELD,LVOL&BCRGR	
871604	NK000751/PC 0671	K8600168	HRS	66.1	65.8	2.9	850	831	5Q-LVOL&BCRGR	
871605	NK000751/PC 0671	K8600169	HRS	66.1	66.0	3.1	820	814	5Q- " "	
871606	NK000751/PC 0671	K8600170	HRS	65.4	65.7	3.1	790	809	4Q- " "	
871607	NK000751/PC 0671	K8600171	HRS	64.5	64.7	2.9	775	787	4P- " "	
871608	NK000751/PC 0671	K8600174	SRS	64.2	63.7	2.1	840	809	6P- " "	&MTIME
871609	APRIL BEARDED/KARCAGI M7K	K8600186	SRS	62.0	61.6	2.2	950	925	2P-FYELD&MTIME	
871610	APRIL BEARDED/KARCAGI M7K	K8600187	SRS	60.8	60.9	1.8	930	936	3P- " "	
871611	CORNERSTONE(WHITE)/ID185//K79251	K8600195	SRS	56.4	58.5	4.3	785	915	8VP-BCRGR	
871612	ID000190/K7905138	K8600196	SWS							
871613	KD000190/K7905317	K8600214	SWS							
871614	ID000190/K7905658	K8600222	SWS							
871615	ID000190/K7905658	K8600223	SWS							
871616	ID000190/K79291	K8600224	SWS							
871617	ID000229/C1017859	K8600238	SWS							
871618	ID000229/C1017859	K8600239	SWS							
871619	ID000240/ID000232	K8600243	HRS	60.0	59.6	2.3	835	810	4Q-MTIME,LVOL&BCRGR	
871620	K7807010/ID000190	K8600245	SWS							
871621	K7807010/ID000190	K8600248	SWS							
871622	K7807010/ID000190	K8600254	SWS							
871623	K7807010/WA0006826	K8600258	SWS							
871624	WA006832/C1017347	K8600264	SWS							
871625	WAVERLY 1A/K82344	K8600271	HWS							
871626	WAVERLY 1A/K82344	K8600272	HWS							
871627	WAVERLY 1A/K82344	K8600273	HWS							
871628	WAVERLY 1B/K82385	K8600274	SWS							
871629	K78584/NK751	8600279	SRS	60.7	60.6	4.7	850	844	3Q-LVOL&BCRGR	
871630	K82229/K78584-2	8600280	HRS	61.9	61.3	2.3	885	848	4Q-MTIME,LVOL&BCRGR	
871631	WAMPUM	C1017691	HRS	63.9	63.4	4.1	945	914	2	
871632	MCKAY	C1017903	HRS	62.1	61.7	4.8	990	965	2	
871633	SPILLMAN	WA007075	HRS	65.5	63.9	3.2	955	856	2	
871634	906R	WP000906	HRS	64.6	62.7	4.0	980	862	2	

COMMENTS: Several of these selections are soft red wheats. Few of the selections have flour yields equal to the check varieties. Two selections that are interesting in good bread baking properties are K8600186 and 187, but they are poor in flour yield and have short/weak dough mixing properties. None of these selections are equal to Wampum or McKay. Several soft white wheats were included in the nursery. These were tested for cookie baking quality and are presented in the table on page 2. No check variety was included, but most appear to be good in quality.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

HARD RED SPRING 85 QUALITY/87

NURSCO 68

PULLMAN, WA

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	CODI	CODIC MTYPE RMKS		
											1/	3/	4/
871612	ID000190/K7905138	K8600196	SWS	63.2	71.1	0.32	91.1	9.5	60.8	9.27	9.22	4L	
871613	KD000190/K7905317	K8600214	SWS	64.4	70.4	0.32	90.3	10.2	59.3	9.37	9.40	1M	
871614	ID000190/K7905658	K8600222	SWS	64.4	69.2	0.34	87.6	10.3	61.0	9.20	9.23	3M	
871615	ID000190/K7905658	K8600223	SWS	63.6	71.1	0.33	90.5	9.9	59.1	9.22	9.21	4L	
871616	ID000190/K79291	K8600224	SWS	62.8	69.7	0.33	88.7	9.8	60.4	9.25	9.23	4M	
871617	ID000229/C1017859	K8600238	SWS	63.6	68.3	0.32	87.9	9.8	61.2	8.97	8.95	2M	Q-FYELD
871618	ID000229/C1017859	K8600239	SWS	62.8	68.0	0.31	87.7	9.9	60.5	9.26	9.25	2M	Q-FYELD
871619	ID000240/ID000232	K8600243	HRS	62.0	69.7	0.29	89.9	10.4	59.9			3M	
871620	K7807010/ID000190	K8600245	SWS	63.6	69.3	0.32	88.7	9.2	59.3	9.30	9.21	2M	
871621	K7807010/ID000190	K8600248	SWS	62.4	69.1	0.32	88.8	9.6	60.5	9.31	9.27	2M	
871622	K7807010/ID000190	K8600254	SWS	61.2	69.4	0.33	88.7	9.6	57.3	9.45	9.41	6L	
871623	K7807010/WA006826	K8600258	SWS	61.6	68.5	0.32	87.6	8.7	57.0	9.22	9.08	3L	
871624	WA006832/C1017347	K8600264	SWS	61.2	70.0	0.34	88.4	10.0	57.4	8.96	8.96	3M	
871625	WAVERLY IA/K82344	K8600271	HWS	61.6	70.3	0.33	89.6	10.1	58.7	8.95	8.96	2M	"Hard"
871626	WAVERLY IA/K82344	K8600272	HWS	61.6	69.7	0.31	90.0	10.1	58.4	9.17	9.19	2M	"Hard"
871627	WAVERLY IA/K82344	K8600273	HWS	61.6	69.9	0.31	90.2	10.3	58.5	9.10	9.13	2M	"Hard"
871628	WAVERLY IB/K82385	K8600274	SWS	62.4	69.8	0.30	90.6	9.3	57.7	9.14	9.06	2M	

NURSCO 69

PULLMAN, WA

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/
871635	WAVERLY	C1017911	SWS	62.0	74.4	0.36	92.6	10.3	60.7
871636	ABERDEEN SELECTION (ID232)	PI468960	SWS	62.0	73.4	0.37	91.1	9.4	57.9
871637	EDWALL	PI477919	SWS	61.1	71.9	0.36	90.0	8.9	58.7
871638	PENAWAWA (WAO06920)	PI1495916	SWS	62.9	70.1	0.40	84.9	9.7	59.8
871639	POTAM 70/FIELDER	WAO06916	SWS	63.0	70.1	0.40	85.1	9.2	58.9
871640	K79299-5 K78504/K74129-33//K7806645...	6/ WA007176	SWS	62.2	71.9	0.40	87.0	9.4	58.9
871641	K78504/K74129-33/K7806645 HF820055	6/ WA007183	SWS	63.2	73.0	0.36	91.2	9.3	58.0
871642	K74182/POTAM 70	5/ WA007187	SWS	63.3	73.0	0.32	93.6	9.9	60.2
871643	K78504/K74129-33//K7806645 K79299-20	5/ WA007492	SWS	62.4	70.1	0.33	89.4	9.5	59.4
871644	K7400315/POTAM 70 S. 47	5/ WA007496	SWS	60.8	72.3	0.41	87.1	9.7	56.2
871645	K79228-1 K74129-23/WA6395	6/ WA007497	SWS	63.7	73.7	0.35	92.9	9.5	60.0
871646	COWBIRD"S"/2*STERLING	ID000312	SWS	64.1	72.7	0.32	93.0	9.0	59.3
871647	STERLING//COWBIRD"S"/STERLING	6/ ID00319	SWS	63.1	72.8	0.34	92.2	8.9	57.5
871648	K7205078/JARAL "S" (B) K76128 S.10	K8100338	SWS	62.0	72.6	0.35	91.5	9.4	58.7
871649	K79224-2 K74129-19/ID000065	5/ K8305002	SWS	62.6	72.7	0.32	93.0	9.3	57.8
871650	K79224-6 K74129-19/ID000065	K8305006	SWS	59.7	70.6	0.36	87.8	9.9	57.0
871651	K79224-10 K74129-19/ID000065	5/ K8305010	SWS	63.2	73.7	0.32	94.5	8.9	57.1
871652	K79224-11 K74129-19/ID000065	*5/ K8305011	SWS	61.7	73.4	0.36	91.9	9.7	57.3
871653	ALONDRA/K79239	K8505001	SWS	59.2	69.7	0.35	87.3	10.5	59.6
871654	K79479/WALLADAY	6/ K8505016	SWS	63.4	69.0	0.33	88.2	9.8	58.3
871655	K79479/WALLADAY	5/ K8505020	SWS	63.6	69.7	0.32	89.4	9.7	58.8
871656	WA6620/WA6402	K8505058	SWS	62.2	67.8	0.35	85.3	10.1	56.9
871657	NAPB-75-6/K7905769	K8505104	SWS	63.2	68.5	0.35	86.2	10.0	58.3

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed ValuesCorrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 69

PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	MTYPE	CODI	CODIC	CAVOL	SCSOR	RMKS
						4/			
871635	WAVERLY	C1017911	SWS	2M	9.32	9.36	1210	68.0	
871636	ABERDEEN SELECTION (ID232)	P1468960	SWS	1M	9.49	9.42	1160	61.0	
871637	EDWALL	P1477919	SWS	2M	9.20	9.08	1215	68.0	
871638	PENAWAWA (WA006920)	P11495916	SWS	3M	9.09	9.05	1255	71.0	
871639	POTAM 70/FIELDER	WA006916	SWS	3M	9.11	9.02	1210	66.0 Q-MSCOR	P-SCSOR
871640	K79299-5 K78504/K74129-33//K7806645...	WA007176	SWS	2M	9.40	9.33	1200	66.0 P-SCSOR	
871641	K78504/K74129-33//K7806645 HF820055	WA007183	SWS	2M	9.45	9.37	1215	64.0 P-	"
871642	K74182/POTAM 70	WA007187	SWS	4M	9.20	9.19	1285	74.0	
871643	K78504/K74129-33//K7806645 K79299-20	WA007492	SWS	2M	9.14	9.08	1190	66.0 Q-FYELD	P-SCSOR
871644	K7400315/POTAM 70 S. 47	WA007496	SWS	2M	9.35	9.32	1315	75.0	
871645	K79228-1 K74129-23/WA6395	WA007497	SWS	3M	9.39	9.33	1225	66.0 P-SCSOR	
871646	COWBIRD"S"/2*STERLING	ID000312	SWS	3M	9.31	9.20	1160	64.0 P-	"
871647	STERLING//COWBIRD"S"/STERLING	ID00319	SWS	2M	9.39	9.27	1260	68.0 P-	"
871648	K7205078/JARAL "S" (B) K76128 S.10	K8100338	SWS	2M	9.22	9.16	1210	65.0 P-	"
871649	K79224-2 K74129-19/ID000065	K8305002	SWS	3M	9.42	9.35	1240	71.0	
871650	K79224-6 K74129-19/ID000065	K8305006	SWS	2M	9.20	9.19	1220	67.0 Q-FYELD&SCSOR	
871651	K79224-10 K74129-19/ID000065	K8305010	SWS	2M	9.50	9.38	1250	71.0	
871652	K79224-11 K74129-19/ID000065	K8305011	SWS	2M	9.31	9.28	1280	77.0 EXCELLENT	
871653	ALONDRA/K79239	K8505001	SWS	4M	9.04	9.09	1230	66.0 Q-FYELD	P-SCSOR
871654	K79479/WALLADAY	K8505016	SWS	4M	9.12	9.10	1315	75.0 Q-FYELD	
871655	K79479/WALLADAY	K8505020	SWS	4M	9.30	9.27	1300	77.0	
871656	WA6620/WA6402	K8505058	SWS	1M	9.10	9.11	1220	66.0 P-FYELD&SCSOR	
871657	NAPB-75-6/K7905769	K8505104	SWS	3M	9.07	9.07	1250	69.0 Q-FYELD&SCSOR	

COMMENTS: Several of these selections (footnoted) have good overall quality. Noteworthy is K8305011 followed by K8505020, which are distinctly better than the other selections in sponge cake quality.

NURSCO 70

PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871658	NDM00011/ALONDRA S84-07	6/ KNC00014	HRS	63.6	71.4	0.32	90.3	11.3	63.4	4H
871659	NHS07664/NDM00004 S83-11	5/ KNC00019	HRS	63.0	71.4	0.26	93.3	10.2	62.3	4M
871660	NDM00004/NHS07664 S83-26	KNC00020	HRS	61.9	70.6	0.33	88.8	10.7	62.8	6M
871661	NHS07664	NHS07664	HRS	62.8	70.9	0.32	89.7	9.7	63.2	7M
871662	NDM00004/NK000751 S83-52	6/ KNC00030	HRS	62.9	69.6	0.33	87.9	10.3	64.4	6M
871663	NDM00004/NK000751 S83-63	KNC00030	HRS	63.7	70.3	0.31	89.4	11.1	63.9	4H
871664	NDM00004/NK000751 S83-65	KNC00030	HRS	62.0	70.6	0.37	86.6	9.9	62.3	4M
871665	NDM00004/NK000751 S83-102	KNC00030	HRS	62.9	70.5	0.35	87.5	10.4	62.3	4M
871666	NK000751/NDM00005 S84-04	KNC00031	HRS	63.7	69.6	0.30	89.2	11.7	67.2	6H
871667	NDM00007/NK000751 S84-01	KNC00034	HRS	63.0	72.6	0.33	90.8	10.8	64.9	5H
871668	NDM00007/NK000751 S84-06	5/ KNC00034	HRS	63.5	70.8	0.31	90.0	11.2	65.2	3H
871669	NDM00010/NK000751 S84-09	5/ KNC00040	HRS	63.6	71.2	0.32	90.1	10.7	65.2	3H
871670	NDM00011/NK000751 S83-10	5/ KNC00042	HRS	63.1	71.5	0.31	90.8	10.6	64.4	4M
871671	NK000751/NDM00011 S83-16	5/ KNC00043	HRS	62.5	71.2	0.31	90.6	10.8	65.4	6M
871672	NK 751	NK761011	HRS	62.8	70.7	0.31	89.9	10.8	63.9	6M
871673	NDM00004/WA006307 S84-01	6/ KNC00047	HRS	62.4	70.2	0.25	92.7	11.4	63.6	3H
871674	BEZ.1/K6901532//ERA	6/ WA006307	HRS	63.0	71.2	0.30	91.0	10.5	63.4	6M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

KNCNDM QUALITY

NURSCO 70

PULLMAN, WA

C.F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
871658	NDM00011/ALONDRA S84-07	KNC00014	HRS	64.4	64.1	3.2	930	911	2	Q-BCRGR
871659	NHS07664/NDM00004 S83-11	KNC00019	HRS	62.2	63.0	3.0	855	905	3	P-LVOL&BCRGR
871660	NDM00004/NHS07664 S83-26	KNC00020	HRS	64.2	64.5	2.8	800	819	4	P- " "
871661	NHS07664	NHS07664	HRS	63.6	64.9	4.7	795	876	4	P- " "
871662	NDM00004/NK000751 S83-52	KNC00030	HRS	65.4	66.1	3.6	865	908	4	P- " "
871663	NDM00004/NK000751 S83-63	KNC00030	HRS	64.7	64.6	4.1	910	904	2	P-LVOL&BCRGR
871664	NDM00004/NK000751 S83-65	KNC00030	HRS	62.9	64.0	3.5	800	868	6	P- " "
871665	NDM00004/NK000751 S83-102	KNC00030	HRS	63.4	64.0	3.1	805	842	6	P- " "
871666	NK000751/NDM00005 S84-04	KNC00031	HRS	69.6	68.9	5.0	915	872	2	Q-LVOL&MTIME (long)
871667	NDM00007/NK000751 S84-01	KNC00034	HRS	66.4	66.6	5.0	850	862	2	Q- " "
871668	NDM00007/NK000751 S84-06	KNC00034	HRS	66.1	65.9	3.6	975	963	2	
871669	NDM00010/NK000751 S84-09	KNC00040	HRS	65.6	65.9	3.5	960	979	2	
871670	NDM00011/NK000751 S83-10	KNC00042	HRS	65.7	66.1	3.6	940	965	2	
871671	NK000751/NDM00011 S83-16	KNC00043	HRS	66.9	67.1	3.3	930	942	2	
871672	NK 751	NK761011	HRS	65.4	65.6	3.7	985	997	2	
871673	NDM00004/WA006307 S84-01	KNC00047	HRS	65.7	65.3	3.1	935	910	2	
871674	BEZ.1/K6901532//ERA	WA006307	HRS	64.6	65.1	3.5	870	901	2	

COMMENTS: Several of these selections (footnoted 5/) appear equal to NK 751. Ohter selections were low in loaf volume and heavy in crumb structure as identified under "Remarks".

WA, ID

NURSCO 71

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABS	MABSC
						1/		1/		3/
871675 DAWS		C1017419	SWW	63.0	76.6	0.40	86.3	9.8	58.9	60.1
871676		60R845	SWW	62.7	76.9	0.40	86.4	10.1	58.2	59.1
871677		67ORCW8626	SWW	62.8	78.7	0.41	86.0	11.0	60.0	60.0
871678		ORCW8314	SWW	58.4	74.0	0.45	84.0	11.3	60.2	59.9
871679 WAMPUM		C1017691	HRS	59.4	75.2	0.47	83.6	11.5	65.5	65.0
871680		6/WA7326	HRS	60.0	76.5	0.50	82.5	12.8	70.2	68.4
871681		WA7328	HRS	57.0	77.3	0.46	84.5	12.2	65.5	64.3
871682 PENEAWA		PI495916	SWS	60.0	75.9	0.50	81.4	10.8	58.0	58.2
871683		6/WA7176	SWS	58.9	75.2	0.51	80.7	10.1	58.0	58.9
871684		WA7496	SWS	57.2	76.2	0.56	78.2	10.6	56.4	56.8
871685 WESTON		C1017727	HRW	62.6	78.9	0.47	83.9	12.8	68.1	66.3
871686 MANNING		C1017846	HRW	60.0	77.6	0.45	84.7	9.4	61.8	63.4
871687 BLIZZARD		ID297	HRW	61.5	80.2	0.41	86.6	13.5	67.7	65.2
871688 SURVIVOR		ID332	HRW	59.5	77.5	0.45	84.9	12.3	67.0	65.7

LABNUM	VARIETY	IDNO	CLASS	MTYPE	VISC	VISCC	CODI	CODIC	CAVOL	SCSOR
								4/		
871675 DAWS		C1017419	SWW	4M	130	162	8.20	8.07	1255	69.0
871676		OR845	SWW	4M	126	147	8.39	8.29	1205	68.0
871677		ORCW8626	SWW	2H	155	155	8.37	8.37	1280	74.0
871678		ORCW8314	SWW	3M	118	113	7.99	8.02	1245	69.0
871679 WAMPUM		C1017691	HRS	5H	205	189	7.81	7.85		
871680		WA7326	HRS	7H	208	160	7.77	7.92		
871681		WA7328	HRS	4H	230	192	7.86	7.96		
871682 PENEAWA		PI495916	SWS	4M	147	152	8.25	8.23	1275	74.0
871683		WA7176	SWS	3M	67	78	8.54	8.44	1240	72.0
871684		WA7496	SWS	3M	79	84	8.31	8.27	1250	71.0
871685 WESTON		C1017727	HRW	1H	295	228	7.91	8.06		
871686 MANNING		C1017846	HRW	3M	156	213	7.91	7.78		
871687 BLIZZARD		ID297	HRW	2H	268	190	7.90	8.10		
871688 SURVIVOR		ID332	HRW	2H	224	185	7.74	7.84		

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 71

WA, ID

LABNUM	VARIETY	IDNO	CLASS	WTIN	NOSCO	FABS	FPEAK	FSTAB	BABS
871675 DAWS		CI017419	SWW	342	71	59.4	4.2	7.2	
871676		OR845	SWW	356	70	61.5	4.5	6.6	
871677		ORCW8626	SWW	342	72	60.6	3.7	4.3	
871678		ORCW8314	SWW	340	68	59.5	2.8	3.2	
871679 WAMPUM		CI017691	HRS			63.6	10.0	12.3	66.2
871680		WA7326	HRS			62.2	25.6	48.8	70.9
871681		WA7328	HRS			65.1	6.7	11.0	67.2
871682 PENEAWA		PI495916	SWS	355	71	58.0	5.6	7.2	
871683		WA7176	SWS	368	72	56.5	2.8	2.8	
871684		WA7496	SWS	341	63	55.7	4.1	4.9	
871685 WESTON		CI017727	HRW			70.1	4.2	4.4	68.8
871686 MANNING		CI017846	HRW			68.1	2.9	5.9	64.5
871687 BLIZZARD		ID297	HRW			69.4	5.3	6.4	69.4
871688 SURVIVOR		ID332	HRW			70.8	5.4	7.2	68.7

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
871675 DAWS		CI017419	SWW						
871676		OR845	SWW						
871677		ORCW8626	SWW						
871678		ORCW8314	SWW						Q-CODI
871679 WAMPUM		CI017691	HRS	65.7	4.1	940	909	2	
871680		WA7326	HRS						
871681		WA7328	HRS	69.1	11.3	935	823	3	Long Mix, Q-LVOL
871682 PENEAWA		PI495916	SWS	66.0	3.6	950	876	2	
871683		WA7176	SWS						
871684		WA7496	SWS						Q-TWT, Ash, & NOSCO
871685 WESTON		CI017727	HRW						
871686 MANNING		CI017846	HRW	67.0	1.4	1005	893	4	
871687 BLIZZARD		ID297	HRW	66.1	3.2	650	749	9	P-LVOL & BCRGR
871688 SURVIVOR		ID332	HRW	66.9	2.5	890	735	6	P- " "
			HRW	67.4	2.4	855	774	7	P- " "

COMMENTS: These samples represent advanced lines which are candidates for release. The SWW, SWS, and HRS lines were grown at an increase nursery at Pullman, WA. The HRW lines were grown at Aberdeen, ID. One-two bushel were milled on a Miag Multimat (Pilot mill) and sub-samples of the flour were sent to 17 industry laboratories for their evaluation. The cooperators represent major foreign and domestic users of PNW wheats. The protein content of the soft wheats were too high for good meaningful results. Results from the individual collaborators are summarized in the project report. See "Remarks" for our evaluation of weaknesses and major deficiencies.

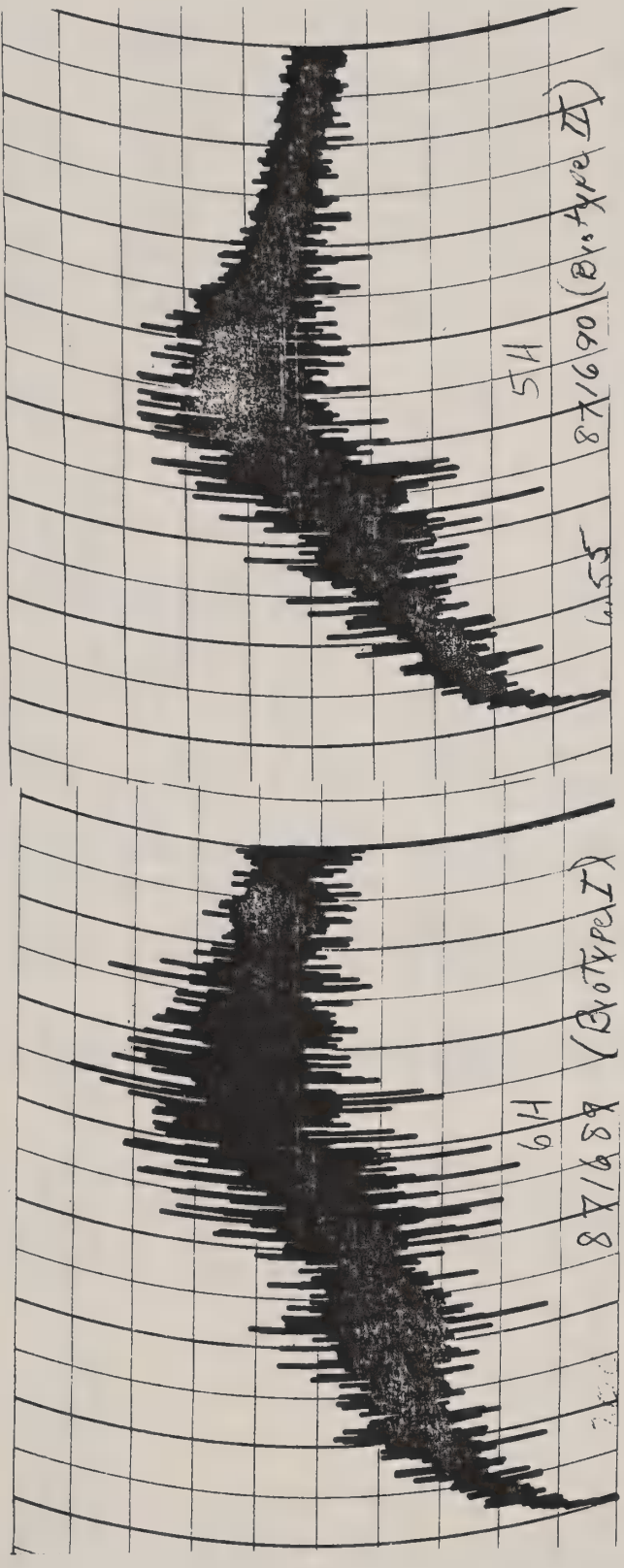
NURSCO 72

ALBANY, CA

D.D. KASARDA

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
871689 BIOTYPE I		C1014193	HRW	64.0	71.3	0.43	84.2	13.0	70.8	6H
871690 BIOTYPE II		C1014193	HRW	63.2	72.6	0.43	85.8	11.9	66.3	5H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
871689 BIOTYPE I		C1014193	HRW	72.5	71.5	5.6	1060	998	2	
871690 BIOTYPE II		C1014193	HRW	65.9	66.0	4.1	955	961	2	



1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: Neither of these sources appear typical in dough mixing properties to Red River 68 which had mixing development requirements significantly longer than these. Biotype I was from World Seeds, grown at St. Thomas, ND. Biotype II was from the USDA Seed Repository, Beltsville, MD. Both were increased at Tulelake, CA, 1987. No oxidation was used in baking and no signs of over/oxidation or buckyness noted.

NURSCO 73

ID, MT, WA

LABNUM	VARIETY	IDNO	CLASS	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	VISC	VISCC	CODICI	CODIC CAVOL
				1/	1/		1/	3/					4/
871691 MCKAY		C1017903	HRS	70.2	0.42	80.1	11.0	61.9	2H	129	161	9.07	8.94
871692 EDWALL		P1477919	SWS	70.9	0.41	80.1	9.8	58.3	2M	123	129	8.65	8.62
871693 FEDERATION		C1004734	SWS	69.6	0.42	76.3	10.7	56.5	2M	127	158	8.80	8.67
871694 OWENS		C1017904	SWS	70.0	0.38	80.6	9.8	58.7	2M	155	172	9.05	8.98
871695 PENEAWA		P1495916	SWS	70.4	0.42	78.5	10.4	56.4	2M				1310
871696 SPILLMAN		P1506350	HRS	70.5	0.42	81.8	11.5	62.4	2H	124	137	8.70	8.63
871697 K78504/K79129-33//K7806645		WA7183	SWS	71.5	0.42	79.3	10.4	57.3	3M				1205
871698 TV18A-CM067/HORK'S		6/ORS8418	HRS	69.6	0.39	80.6	11.8	61.5	3H				
871699 TANAGER S1B, CM30697-2		6/ORS8508	HRS	70.2	0.41	80.5	12.0	61.9	3H				
871700 NHS7664/NDM0004, 82-18		WA7328	HRS	73.7	0.40	88.3	11.8	60.6	2H				
871701 K7205078/C114193, S65		5/WA7326	HRS	72.6	0.41	85.8	12.2	64.6	5H				
871702 K78504/K74129-33//K7806645, N25		6/WA7176	SWS	72.1	0.45	79.4	9.8	56.2	1M	70	87	9.10	8.97
871703 K78504/K74129-33//K7806645, HF64		6/WA7492	SWS	67.4	0.41	75.9	10.1	55.8	2M	107	126	8.76	8.66
871704 WYNNE/ID0125		5/UT402265	HRS	72.2	0.40	84.9	11.5	62.3	3H				1265
871705 MC/BJ066/4/TZPP/SN64/3/LEE/NO. 58/TC		5/ID0303	HRS	72.2	0.40	84.2	12.0	64.5	4H				1270
871706 COWBIRD S./2*STERLING		6/ID0312	SWS	71.5	0.38	83.1	10.1	57.1	2M	127	149	8.87	8.78
871707 SLG//COWBIRD S./SLG		ID0315	SWS	70.5	0.38	81.2	10.2	59.3	3M	190	219	8.39	8.30
871708 SLG//COWBIRD S./SLG		6/ID0319	SWS	71.8	0.37	85.5	9.8	58.5	3M	128	159	8.89	8.76
871709 UT76S88-1292/UT74S25-943		6/UT461941	HRS	71.3	0.41	82.0	11.6	61.0	3H				
871710 UT76S88-1292/UT74S25-868		5/UT001111	HRS	71.9	0.39	85.0	11.8	62.3	5H				
871711 UT76S88-1398/WYNNE		5/UT001821	HRS	70.4	0.38	83.3	11.7	61.6	3H				1250
871712 UT76S88-1398/UT74S25-910		5/UT002171	HRS	70.6	0.38	83.1	11.8	62.1	3H				1135
871713 POWELL/UT74S25-916		UT002506	HRS	68.5	0.38	80.0	12.0	62.3	4H				1240
871714 VEERY.S, CM33027F		ORS8509	HRS	67.5	0.41	77.1	11.7	60.0	2H				
871715 MINIVET.S, CM37705K		6/ORS8510	HRS	70.0	0.40	82.1	11.3	61.0	4H				
871716 KVZ/3/TOB/CFN//BB/4/BLO		ORS8511	HRS	68.5	0.39	79.8	12.4	59.2	2H				
871717 TITMOUSE.S, CM30136-3		ORS8422	HRS	68.2	0.38	80.8	12.0	60.8	2H				
871718 BOW.S, CM33023-F		ORS8512	HRS	68.4	0.39	79.6	11.6	59.7	2H				
871719 K7400315/PTM70S.47		6/WA7496	SWS	69.9	0.45	75.1	10.7	58.9	3M	111	117	9.04	9.00
871720 COWBIRD S./STERLING		ID0307	HRS	72.7	0.41	85.7	12.5	60.9	2H				1315
871721 COWBIRD S./5/MC/BJ066/4//TZPP/SN64/3/		6/ID0341	HRS	70.8	0.42	82.8	13.2	62.6	4H				
871722 COWBIRD S./STERLING		6/ID0365	HRS	72.5	0.42	83.5	12.1	62.3	4H				
871723 BRH/3/11-60-101//TZPP/SN64/4/ID042//SN64		6/ID0366	HRS	71.6	0.35	87.1	12.7	62.3	4H				
871724 2*SLG//COWBIRD S./SLG		6/ID0348	SWS	70.8	0.37	83.0	9.8	57.7	2M	115	143	8.87	8.74
871725 OWENS/FIELDWIN		5/ID0372	SWS	69.4	0.33	83.1	9.7	58.1	1M	137	174	9.15	9.01

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 11% Protein.

NURSCO 73

ID, MT, WA

LABNUM	VARIETY	IDNO	CLASS	SCSOR	WTIN	NOSCO	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
								3/			4/		
871691	MCKAY	C1017903	HRS				62.6	62.6	2.8	910	910	5	Q-BCRGR
871692	EDWALL	P1477919	SWS	75.0	350	78							
871693	FEDERATION	C1004734	SWS	72.0	360	76							
871694	OWENS	C1017904	SWS	76.0	364	80							
871695	PENEHAWA	P1495916	SWS	76.0	352	77							
871696	SPILLMAN	P1506350	HRS				63.6	63.1	1.9	1000	969	3	Q-MTIME&BCRGR
871697	K78504/K79129-33//K7806645	WA7183	SWS	67.0	359	76							P-SCSOR Q-MIXO
871698	TV18A-CM067/HORK S'	ORS8418	HRS				64.0	63.2	2.6	930	880	4	Q-BCRGR
871699	TANAGER SIB, CM30697-2	ORS508	HRS				64.1	63.1	2.3	980	918	2	Q-MTIME
871700	NHS7664/NDM0004, 82-18	WA7328	HRS				63.1	62.3	2.8	890	840	6	Q-LVOL&BCRGR
871701	K7205078/C114193, S65	WA7326	HRS				67.0	65.8	5.3	1010	936	2	
871702	K78504/K74129-33//K7806645, N25	WA7176	SWS	72.0	364	77							
871703	K78504/K74129-33//K7806645, HF64	WA7492	SWS	74.0	370	79							
871704	WYNNE/ID0125	UT402265	HRS				64.5	64.0	3.1	970	939	2	
871705	MC/BJ066/4/TZPP/SN64/3/LEE/NO.58/TC	ID0303	HRS				67.2	66.2	4.2	990	928	2	
871706	COWBIRD S./2*STERLING	ID0312	SWS	71.0	361	81							Q-SCSOR
871707	SLG//COWBIRD S./SLG	ID0315	SWS	64.0	349	78							P-CODI&CAVOL
871708	SLG//COWBIRD S./SLG	ID0319	SWS	73.0	355	77							Q-SCSOR
871709	UT76S88-1292/UT74S25-943	UT461941	HRS				63.3	62.7	3.6	935	898	4	Q-BCRGR
871710	UT76S88-1292/UT74S25-868	UT001111	HRS				63.8	63.0	4.5	1015	965	2	
871711	UT76S88-1398/WYNNE	UT001821	HRS				64.0	63.3	2.9	1030	987	2	
871712	UT76S88-1398/UT74S25-910	UT002171	HRS				64.6	63.8	3.3	1015	965	2	
871713	POWELL/UT74S25-916	UT002506	HRS				65.0	64.0	3.7	1080	1018	2	Q-FYELD
871714	VEERY.S,CM33027F	ORS8509	HRS				61.4	60.7	1.8	845	802	9	P-FYELD,MTIME,LV&BCR
871715	MINIVET.S,CM37705K	ORS8510	HRS				63.0	62.7	3.2	955	936	4	Q-BCRGR
871716	KVZ/3/TOB/CFN//BB/4/BLO	ORS8511	HRS				62.3	60.9	2.1	825	738	8	P-FYELD,MT,LV&BCRGR
871717	TITMOUSE.S,CM30136-3	ORS8422	HRS				63.5	62.5	2.4	930	868	4	Q-FYELD,MTIME&BCRGR
871718	BOW.S,CM33023-F	ORS8512	HRS				62.0	61.4	2.8	855	818	8	P-FYELD,VLOL&BCRGR
871719	K7400315/PTM70S.47	WA7496	SWS	76.0	353	72							High FASH Q-MSCOR
871720	COWBIRD S'/STERLING	ID0307	HRS				64.1	62.6	2.2	985	892	4	Q-MTIME&BCRGR
871721	COWBIRD S'/5/MC/BJ066/4//TZPP/SN64/3/	ID0341	HRS				66.5	64.3	3.6	1010	874	2	
871722	COWBIRD S'/STERLING	ID0365	HRS				65.1	64.0	3.8	985	917	3	
871723	BRH/3/11-60-101//TZPP/SN64/4/ID042//SN64	ID0366	HRS				65.7	64.0	4.0	1000	895	3	
871724	2*SLG//COWBIRD S'/SLG	ID0348	SWS	75.0	370	80							Excellent Cookie,
871725	OWENS/FIELDWIN	ID0372	SWS	78.0	374	81							cake & noodle

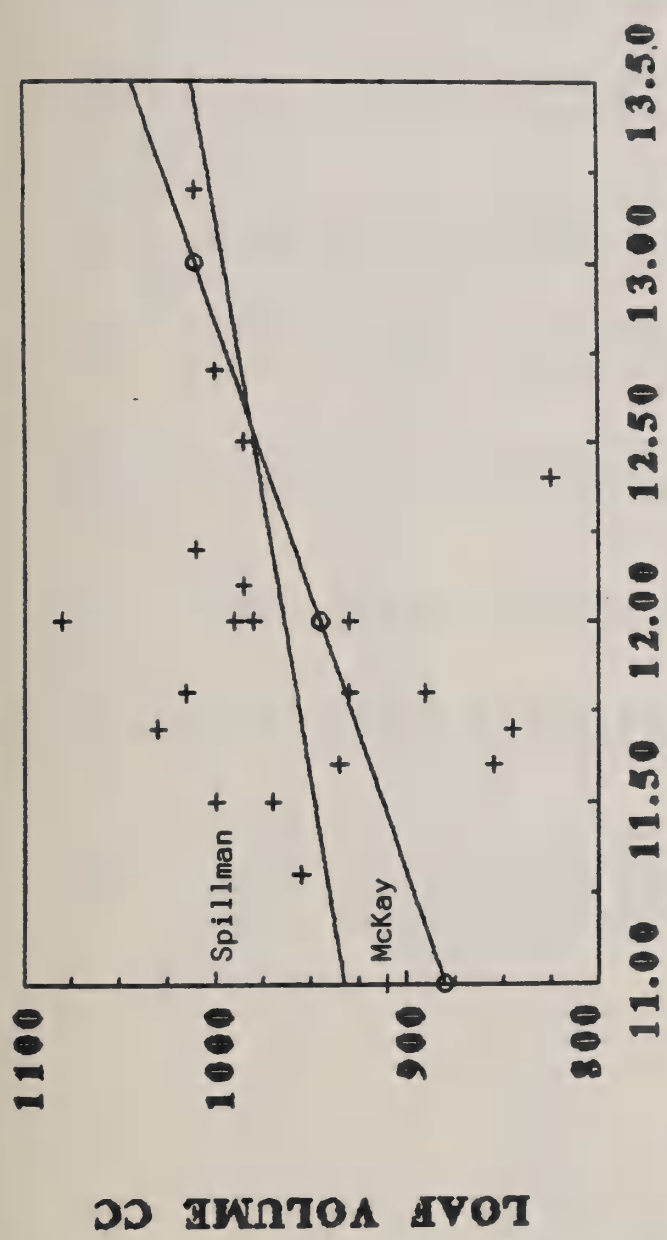
NURSCO 73

ID, MT, WA

LABNUM	VARIETY	IDNO	CLASS	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	VISC	VISCC	CODI	CODIC	CAVOL
				<u>1/</u>			<u>1/</u>	<u>3/</u>					<u>4/</u>	
871726	ID0172/FIELDWIN SEL.8	<u>6/</u> ID0373	SWS	71.2	0.35	84.4	9.7	57.1	1M	108	137	8.89	8.74	1290
LABNUM	VARIETY	IDNO	CLASS	SCSOR	WTIN	NOSCO	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS	
								<u>3/</u>			<u>4/</u>			
871726	ID0172/FIELDWIN SEL.8	ID0373	SWS	75.0	371	80								

COMMENTS: A composite sample of each entry from Kalispell and Bozeman, MT, Tetonia and Twin Falls, ID, and Madras, OR was used for quality tests. Several of the selections are equal to or better than the check varieties (as footnoted). Others were poor in one or more factors (see "Remarks" for deficiencies). See page 3 for a plot of loaf volume vs. protein of the HRS selections.

LOAF VOLUME VS PROTEIN
WESTERN REGIONAL SPRING (HRS)



PROTEIN %

+ LOAF VOLUME o EXPECTED

Statistics	Graph A	Graph B	Graph C	Graph D
Size	22	0	0	0
Total	21145	0	0	0
Mean	961.136364	0	0	0
Maximum	1080	0	0	0
Minimum	825	0	0	0
Standard Dev.	64.91628	0	0	0
Standard Error	13.840197	0	0	0
95% Confidence	27.126787	0	0	0
99% Confidence	35.707709	0	0	0
a0	588.333333	0	0	0
a1	31.280193	0	0	0
a2	0	0	0	0
a3	0	0	0	0
a4	0	0	0	0
a5	0	0	0	0
a6	0	0	0	0
Rval	0.232585	0	0	0

NURSCO 74

ID, MT, OR, WA

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	CODI
871727	KHARKOF	C101442	HRW	61.7	70.6	0.39	82.3	12.5	60.0	2H	8.09
871728	ELGIN	C1011755	CLUB	60.5	73.2	0.38	84.4	10.1	50.7	2M	8.99
871729	MORO	C1013740	CLUB	60.1	73.2	0.40	83.9	10.1	51.5	2M	8.94
871730	NUGAINES	C1013968	SWW	60.7	70.0	0.39	80.7	9.6	57.2	3M	8.64
871731	STEPHENS	C1017596	SWW	61.1	73.0	0.39	84.5	9.8	55.1	2M	8.85
871732	TRES	C1017917	CLUB	61.5	71.5	0.38	81.9	9.7	52.2	1M	9.09
871733	DUSTY	PI486429	SWW	60.4	71.7	0.39	81.9	9.2	56.3	3L	9.14
871734	OVESON	OR7996	SWW	60.3	70.7	0.39	80.2	9.6	57.6	3L	9.06
871735	7C/CNO/CAL/3/YMH	6/ORCW8314	SWW	60.1	71.7	0.39	81.6	9.1	56.0	1M	8.81
871736	VPM/MOS951//2*OR68007	6/WAT163	SWW	61.2	72.8	0.40	82.6	10.2	55.2	1M	8.75
871737	VPM/MOS421//2*TYEE	5/WAT166	CLUB	60.4	73.1	0.37	86.7	9.7	57.9	4M	8.81
871738	V77254, OASIS/WA6362/WA6242, VH083572	WAT216	SWW	59.9	70.6	0.42	79.2	9.5	56.6	3M	8.44
871739	VPM/MOS951//2*BRB	5/WAT217	CLUB	60.7	73.4	0.38	86.4	10.7	54.0	2M	8.95
871740	TJB 841/1543//YMH/63-122-66-2	ORCW8421	SWW	60.6	70.8	0.37	82.3	10.3	56.3	3M	8.72
871741	MCD/ROMANIAN//OR7141, K-83	OR8270	SWW	59.1	70.4	0.39	80.0	9.4	55.9	2M	8.46
871742	NORTENO/YAMHILL//6720-13	ORCW8416	SWW	60.5	72.1	0.38	83.6	9.9	56.9	3M	8.94
871743	6720-10//YAMHILL/HYSLOP	ORCW8519	SWW	61.1	71.0	0.39	81.2	9.8	55.9	2M	8.92
871744	TJB801-12795/STEPHENS	ORCW8517	SWW	60.4	71.4	0.36	83.1	10.3	56.4	2M	8.76
871745	NEELEY/SPN//SPN(A791128W-A-1)	ID0329	SWW	60.9	70.4	0.40	79.3	9.0	55.4	2M	8.34
871746	NEELEY/SPN//SPN(A791128W-B-2)	5/ID0330	SWW	59.9	72.6	0.38	84.7	9.7	56.5	2M	8.74
871747	VPM1/MOS//CERCO/LUKE	6/WAT432	SWW	58.6	69.6	0.37	80.5	10.0	59.3	3M	8.77
871748	MARIS HUNTSMAN/VH074521	WA7433	SWW	59.9	66.1	0.41	69.4	10.3	55.4	2M	8.00
871749	WA4303/PURDUE SEL.//820/OMAR/1834/	WA7435	SWW	60.5	71.5	0.39	83.0	9.4	56.7	3M	8.59
871750	PAHA/C113645/2*CH/AE/PN/2*OMAR, 85117	6/WAT437	CLUB	61.2	73.0	0.37	85.6	10.1	58.2	3M	8.66
871751	HYSLOP/CERCO, H-308	OR843	SWW	62.0	67.8	0.31	77.5	9.8	57.4	3M	7.81
871752	HYSLOP/CERCO, B-307	OR842	SWW	61.1	68.6	0.41	75.8	9.8	57.4	3M	7.92
871753	HYSLOP/YAYLA//63-112-66-4/3/OR7065,	OR845	SWW	62.1	70.1	0.39	80.3	9.4	58.9	4M	8.65
871754	DAWS/SM4//MDM//SM11, FW 81454-301	ORFW301	SWW	60.9	72.1	0.28	87.6	9.6	54.3	2M	8.79
871755	TJB259-83/3/CD/P101//DCR	ORCW8521	SWW	61.4	69.7	0.41	77.5	9.9	58.2	2M	8.77
871756	RMN 73-71/TORIM	ORCW8522	SWW	63.0	68.4	0.38	77.4	10.2	57.9	2M	8.60
871757	YMH/MCD/2/T.SPELTA/3/SU92/RDL/4 NB	6/ORF75336	SWW	59.9	71.3	0.38	81.1	9.2	58.9	2M	8.66
871758	FARO/BRB//WA6581, VD08185	5/WAT528	CLUB	60.2	72.1	0.39	83.5	9.2	56.0	1M	9.20
871759	LUKE/VH67375//VPM/MOS, VH082258	5/WAT529	SWW	59.0	73.4	0.40	83.4	9.2	58.1	3M	9.06
871760	TRES COMPOSITE CROSS	6/WAT526	CLUB	60.6	72.3	0.40	82.9	9.7	54.4	1M	9.06
871761	TRES MULTILINE 86	5/WAT527	CLUB	60.7	73.5	0.39	86.4	9.5	53.9	1M	9.01

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 74

ID, MT, OR, WA

LABNUM	VARIETY	IDNO	CLASS	CODIC 4/	CAVOL	SCSOR	WTIN	NOSCO	VISC	VISCC	RMKS
871727	KHARKOF	C101442	HRW	8.29	1170	68.0	363	68	314	210	
871728	ELGIN	C1011755	CLUB	8.99	1255	75.0	365	65	99	97	
871729	MORO	C1013740	CLUB	8.95	1235	69.0	367	70	132	129	
871730	NUGAINES	C1013968	SWW	8.59	1240	72.0	345	68	124	135	
871731	STEPHENS	C1017596	SWW	8.83	1245	72.0	353	69	89	92	
871732	TRES	C1017917	CLUB	9.07	1265	73.0	359	72	65	69	
871733	DUSTY	PI486429	SWW	9.05	1310	77.0	335	64	85	101	
871734	OVESON	OR7996	SWW	9.02	1250	71.0	345	65	99	107	
871735	7C/CNO/CAL/3/YMH	ORCW8314	SWW	8.71	1275	71.0	362	71	60	72 Q-CODI	
871736	VPM/MOS951//2*OR68007	WA7163	SWW	8.77	1225	71.0	357	69	120	115 Q-CAVOL	
871737	VPM/MOS421//2*TYEE	WA7166	CLUB	8.79	1335	79.0	346	72	152	161	
871738	V77254,OASIS/WA6362/WA6242,VH083572	WA7216	SWW	8.38	1290	73.0	318	75	171	189 Q-MILLING P-CODI	
871739	VPM/MOS951//2*BRB	WA7217	CLUB	9.00	1315	76.0	361	71	141	124	
871740	TJB 841/1543//YMH/63-122-66-2	ORCW8421	SWW	8.76	1240	68.0	343	75	142	134 Q-CODI&SCSOR	
871741	MCD/ROMANIAN//OR7141, K-83	OR8270	SWW	8.40	1200	65.0	347	58	71	80 P-CODI,SCSOR&NOSCOR	
871742	NORTENO/YAMHILL//6720-13	ORCW8416	SWW	8.93	1210	66.0	344	62	139	142 P-SCSOR&NOSCOR	
871743	6720-10//YAMHILL/HYSLOP	ORCW8519	SWW	8.90	1195	67.0	346	71	116	121 P-SCSOR	
871744	TJB801-12795/STEPHENS	ORCW8517	SWW	8.80	1205	66.0	359	67	147	139 P-SCSOR&NOSCOR	
871745	NEELEY/SPN//SPN(A791128W-A-1)	ID0329	SWW	8.23	1160	68.0	350	67	103	128 P-CODI,SCSOR,NOSCOR&MSCOR	
871746	NEELEY/SPN//SPN(A791128W-B-2)	ID0330	SWW	8.70	1265	76.0	352	74	86	91	
871747	VPM1/MOS//CERCO/LUKE	WA7432	SWW	8.77	1350	78.0	342	72	137	137 Q-FYELD	
871748	MARIS HUNTSMAN/VH074521	WA7433	SWW	8.03	1165	65.0	335	62	123	117 P-FYELD	
871749	WA4303/PURDUE SEL.//820/OMAR/1834/	WA7435	SWW	8.52	1275	71.0	348	71	152	172 Q-P-CODI	
871750	PAHA/C113645/2*CH/AE/PN/2*OMAR,85117	WA7437	CLUB	8.67	1240	74.0	363	72	141	138 Q-CODI	
871751	HYSLOP/CERCO, H-308	OR8443	SWW	7.79	1090	60.0	342	70	126	131 P-FYELD,CODI&SCSOR	
871752	HYSLOP/CERCO, B-307	OR842	SWW	7.90	1150	63.0	343	72	139	144 P-FYELD,CODI&SCSOR	
871753	HYSLP/YAYLA//63-112-66-4/3/OR7065,	OR845	SWW	8.58	1205	71.0	332	70	123	139 Q-MSCOR&CODI	
871754	DAWS/SM4//MDM//SM11, FW 81454-301	ORFW301	SWW	8.74	1185	67.0	344	69	84	91 P-SCSOR Q-NOSCOR	
871755	TJB259-83/3/CD/P101//DCR	ORCW8521	SWW	8.76	1180	68.0	344	70	108	110 P-MSCOR Q-SCSOR	
871756	RMN 73-71/TORIM	ORCW8522	SWW	8.62	1185	68.0	341	69	128	123 P-MSCOR Q-CODI&SCSOR	
871757	YMH/MCD/2/T.SPELTA/3/SU92/RDL/4 NB	ORF75336	SWW	8.57	1335	79.0	354	70	71	84 Q-CODI	
871758	FARO/BRB//WA6581, VD08185	WA7528	CLUB	9.14	1345	79.0	368	74	53	62	
871759	LUKE/VH67375//VPM/MOS, VH082258	WA7529	SWW	8.97	1330	79.0	348	74	92	109	
871760	TRES COMPOSITE CROSS	WA7526	CLUB	9.04	1315	77.0	364	65	67	71 P-NOSCOR	
871761	TRES MULTILINE 86	WA7527	CLUB	8.98	1290	74.0	353	74	75	83	

COMMENTS: Analysis were done on composites made from equal amounts of seed grown at Ontario, OR, Aberdeen, ID, Kalispell, MT, and Ritzville, WA.

Several of the selections footnoted as promising in overall quality are marginal or questionable for some properties and are noted in the "Remarks". See "Remarks" for major deficiencies of selections not footnoted as acceptable.

ID, MT, WA

NURSCO 75

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
8711762	KHARKOF	C101442	HRW	60.9	68.2	0.38	79.6	12.9	65.5	2H
8711763	WANSER	C1013844	HRW	61.9	70.6	0.35	84.5	12.1	66.1	3H
8711764	ANDREW	WA6820	HRW	60.9	71.3	0.37	84.8	12.2	65.0	4H
8711765	PROBSTORFER-EXTREM/TOB66	ORCR8313	HRW	61.8	70.6	0.36	84.5	11.5	65.8	4H
8711766	A68203W-E-3-3/A68203 W-1-6-1	ID297	HRW	62.7	73.0	0.36	88.8	12.5	64.2	3H
8711767	21T65 OR 2CNN OR 2MC/C114107	ID298	HRW	63.3	73.4	0.40	87.5	12.4	66.7	4H
8711768	HGL/ID5006/4/11-60-156/C1014107/IT/3/	ID301	HRW	61.3	72.0	0.39	85.6	11.8	66.6	4H
8711769	ARBON/3/DM/CLM//BURT/PI178383	6/ID302	HRW	60.8	71.1	0.38	84.4	12.2	65.8	3H
8711770	MARNE DESPREZ/COLOTANA//PICH	ORCR8320	HRW	61.1	70.1	0.35	84.1	12.5	66.0	4H
8711771	RGR/3/11-60-157/MC/MRN/4/11-60-156/	ID0331	HRW	62.0	69.3	0.36	82.4	13.2	65.2	2H
8711772	11-60-156-/C114107//IT/4/NRN/ANABLA1487	ID0332	HRW	60.3	70.1	0.36	83.4	12.5	66.0	3H
8711773	A75211W-81-1-3T BUCKSKIN/ID0076	ID0333	HRW	62.4	67.5	0.34	79.0	13.0	66.2	2H
8711774	TK/BURT/4/SM 6/4/2IT/UT 17A-53//BDLS	ID0335	HRW	62.5	68.7	0.38	79.9	12.5	66.6	3H
8711775	ATL 50/4/R/R//2*CNN/3/4*TK/5/SM4/4/BURT	ID0336	HRW	62.1	71.9	0.36	86.6	12.3	64.7	2H
8711776	A781011W-1 A72572-71-2-1/A77695W	ID0337	HRW	63.9	71.5	0.37	85.8	12.7	65.9	4H
8711777	SN64/11-60-155/HGL/3/WRR//KO/PI178383	ID0338	HRW	61.4	71.0	0.36	84.4	11.5	65.5	4H
8711778	ID92/N7403301, N8308502	WA7429	HRW	62.5	71.7	0.37	86.5	11.0	65.4	2H
8711779	PMF//CNO S/GLL	6/ORCR8414	HRW	61.9	69.9	0.38	83.0	12.1	64.9	3H
8711780	F60213-76, ME CB78241	OR8315	HRW	60.0	68.0	0.36	81.0	12.5	61.8	1H
8711781	UT755079/CREST56//TX 65A1268	6/MT79121	HRW	61.0	69.6	0.34	84.9	11.9	66.6	5H
8711782	UT755079/CREST56//TX 65A1268	MT79123	HRW	61.1	67.7	0.32	82.1	11.6	66.2	4H
8711783	UT755079/CREST56//TX 65A1268	MT79125	HRW	60.5	69.6	0.37	83.2	12.2	66.4	2H
8711784	HATTON SIB//SHORT WHEAT/SCOUT	6/WA7522	HRW	62.4	71.9	0.37	85.1	11.5	65.9	3H
8711785	FREDRICK/SPRAGUE, N8402101	WA7523	HRW	61.0	71.4	0.37	84.7	11.7	64.7	3H
8711786	C19342/ITANA//ID092, N8501101	6/WA7524	HRW	61.3	71.3	0.41	83.5	12.7	65.4	4H
8711787	CERCO/HTN/5/KVZ/3/BNK//BURT/WA4303	WA7525	HRW	62.4	71.5	0.40	83.0	13.0	66.6	4H
8711788	PMF//CNO S/GLL	ORCR8601	HRW	61.7	72.2	0.38	85.9	12.2	65.4	4H
8711789	MANNING/BEZOSTAJA-1	6/UT156751	HRW	63.5	72.0	0.37	86.6	10.9	65.9	4H
8711790	MANNING/BEZOSTAJA-1	6/UT156775	HRW	62.4	71.3	0.37	85.3	10.5	66.8	4H
8711791	MANNING/BEZOSTAJA-1	UT156712	HRW	62.1	71.9	0.36	84.7	11.6	65.1	2H
8711792	MANNING/SADOVO-1	UT156516	HRW	61.3	69.0	0.36	81.1	10.9	67.1	3H
8711793	ABERDEEN SEL.	5/ID351	HRW	63.0	72.3	0.36	87.1	12.6	66.4	2H
8711794	ABERDEEN SEL.	ID352	HRW	62.9	68.6	0.35	81.6	12.5	66.9	4H
8711795	ABERDEEN SEL.	ID353	HRW	62.1	71.6	0.35	86.5	11.4	66.2	4H
8711796	ABERDEEN SEL.	ID354	HRW	62.7	69.7	0.35	83.2	12.6	65.5	2H

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 12% Protein.

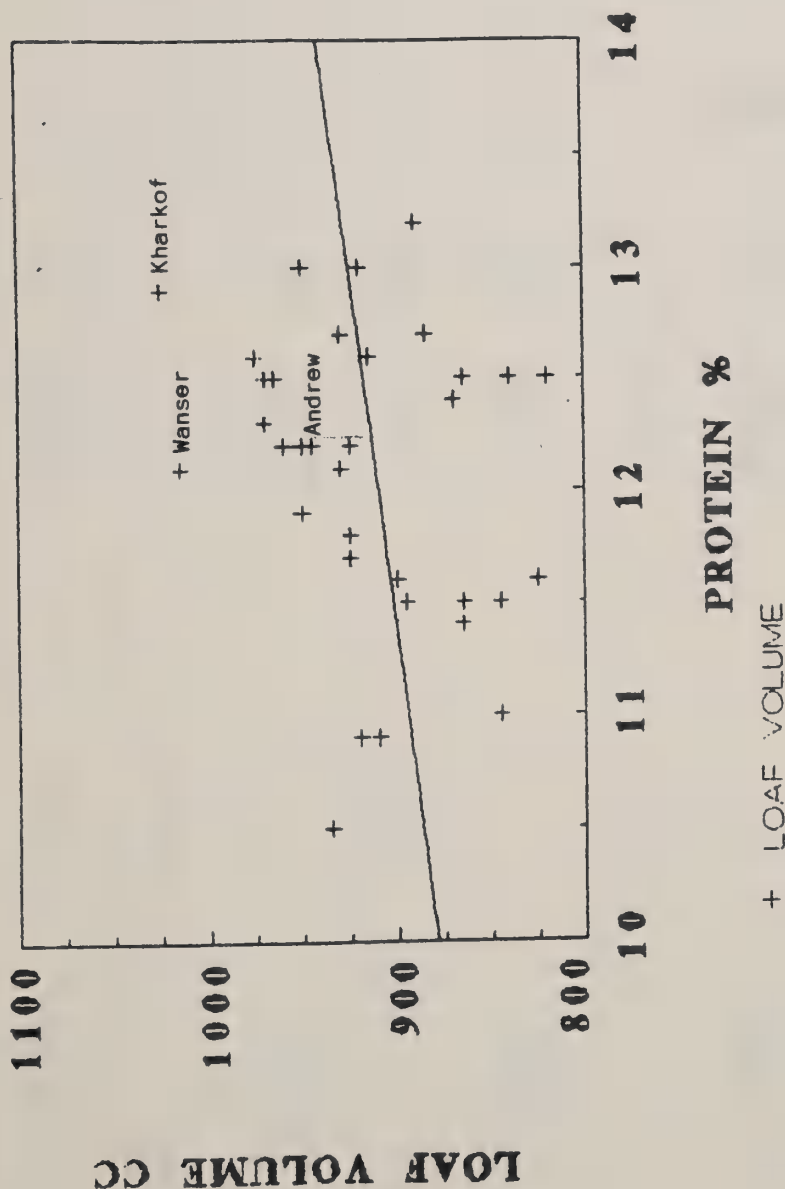
NURSCO 75

ID, MT, WA

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
871762	KHARKOF	C101442	HRW	68.1	67.2	2.6	1025	974	2	
871763	WANSER	C1013844	HRW	67.9	67.8	3.3	1015	1008	2	
871764	ANDREW	WA6820	HRW	65.9	65.7	2.9	945	933	3	
871765	PROBSTORFER-EXTREM/T0B66	ORCR8313	HRW	67.0	67.5	3.5	865	896	4	P-LVOL Q-BCRGR
871766	A68203W-E-3-3/A68203 W-1-6-1	ID297	HRW	66.4	65.9	2.8	865	834	5	P-LVOL&BCRGR
871767	21T65 OR 2CNN OR 2MC/C114107	ID298	HRW	68.8	68.4	4.2	870	845	2	P-LVOL
871768	HGL/ID5006/4/11-60-156/C1014107/IT/3/	ID301	HRW	68.1	68.3	2.8	925	937	4	Q-BCRGR
871769	ARBON/3/DM/CLM//BURT/PI178383	ID302	HRW	67.7	67.5	3.1	960	948	4	Q-BCRGR
871770	MARNE DESPREZ/COLOTANA//PICH	ORCR8320	HRW	68.2	67.7	3.2	820	789	4	P-LVOL&BCRGR
871771	RGR/3/11-60-157/MC/MRN/4/11-60-156/	ID0331	HRW	68.1	66.9	2.3	890	816	4	P-LVOL,BCRGR&MTIME
871772	11-60-156-/C114107//IT/4/NRN/ANABLA1487	ID0332	HRW	68.2	67.7	2.5	840	809	5	P- " " "
871773	A75211W-81-1-3T BUCKSKIN/ID0076	ID0333	HRW	68.9	67.9	2.0	950	888	4	P-FYELD,LVOL,BCRGR&MT
871774	TK/BURT/4/SM 6/4/2IT/UT 17A-53//BDLS	ID0335	HRW	68.8	68.3	2.6	970	939	3	Low FYELD P-MTIME&BCR
871775	ATL 50/4/R/R//2*CNN/3/4*TK/5/SM4/4/BURT	ID0336	HRW	66.7	66.4	2.1	970	951	4	P-MTIME Q-BCRGR
871776	A781011W-1 A72572-71-2-1/A77695W	ID0337	HRW	68.3	67.6	4.0	885	842	2	Low AWRC
871777	SN64/11-60-155/HGL/3/WRR//KO/PI178383	ID0338	HRW	66.7	67.2	4.0	845	876	4	Q-LVOL&BCRGR
871778	ID92/N7403301, N8308502	WA7429	HRW	66.1	67.1	2.4	845	907	7	P-MTIME&BCRGR
871779	PMF//CNO S/GLL	ORCR8414	HRW	66.7	66.6	3.0	930	924	3	Q-BCRGR
871780	F60213-76, ME CB78241	OR8315	HRW	63.0	62.5	1.0	775	744	9	P-FYELD,LVOL&BCRGR
871781	UT755079/CREST56//TX 65A1268	MT79121	HRW	68.2	68.3	4.0	950	956	2	
871782	UT755079/CREST56//TX 65A1268	MT79123	HRW	67.5	67.9	3.0	900	925	6	P-FYELD&BCRGR
871783	UT755079/CREST56//TX 65A1268	MT79125	HRW	68.3	68.1	2.2	950	938	6	P-MTIME&BCRGR
871784	HATTON SIB//SHORT WHEAT/SCOUT	WA7522	HRW	67.1	67.6	2.4	895	926	3	
871785	FREDRICK/SPRAGUE, N8402101	WA7523	HRW	66.1	66.4	2.8	925	944	4	Q-BCRGR
871786	C19342/ITANA//ID092, N8501101	WA7524	HRW	67.8	67.1	3.0	930	887	2	Q-LVOL
871787	CERCO/HTN/5/KVZ/3/BNK//BURT/WA4303	WA7525	HRW	69.3	68.3	3.4	920	858	3	Q-LVOL&BCRGR
871788	PMF//CNO S/GLL	ORCR8601	HRW	67.3	67.1	3.1	925	913	4	Q-BCRGR
871789	MANNING/BEZOSTAJA-1	UT156751	HRW	66.5	67.6	3.4	910	978	4	Q- "
871790	MANNING/BEZOSTAJA-1	UT156775	HRW	67.0	68.5	3.6	935	1028	4	Q- "
871791	MANNING/BEZOSTAJA-1	UT156712	HRW	66.4	66.8	2.9	825	850	8	P-LVOL&BCRGR
871792	MANNING/SADOV0-1	UT156516	HRW	67.7	68.8	3.7	920	988	4	Q-FYELD&BCRGR
871793	ABERDEEN SEL.	ID351	HRW	67.7	67.1	2.2	975	938	3	
871794	ABERDEEN SEL.	ID352	HRW	69.1	68.6	2.6	965	934	2	P-FYELD
871795	ABERDEEN SEL.	ID353	HRW	67.3	67.9	3.5	855	892	3	P-LVOL Q-BCRGR
871796	ABERDEEN SEL.	ID354	HRW	66.8	66.2	2.0	915	878	3	Q-FYELD&LVOL

COMMENTS: Equal amounts of seed from Stillwater and Kalispell, MT, Aberdeen and Tetonia, ID, and Lind, WA were composited for the study. Those that appear promising in both flour milling and bread baking quality are footnoted. See "Remarks" for major deficiencies of those selections not acceptable in overall quality. Several of the selections were found to be short and weak in dough mixing properties, low in loaf volume (for their protein level), and heavy in crumb structure. Such type of wheats should not have been advanced to the Western Regional Nursery. See plot of loaf volume vs. protein on page 2. The broad scattering indicates the wide range of quality within the selections. The slope of the regression line is only 15.26 cc/% protein indicates a low response in loaf volume as a group (normal is 65 cc).

LOAF VOLUME VS PROTEIN WESTERN REGIONAL HARD RED WINTER



Statistics	Graph A
Size	35
Total	31895
Mean	911.285714
Maximum	1025
Minimum	775
Standard Dev.	55.682171
Standard Error	9.412005
95% Confidence	18.447529
99% Confidence	24.282972
a0	726.673347
a1	15.268036
a2	0
a3	0
a4	0
a5	0
a6	0
Rval	0.181076

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

LARGE SCALE DUAL PURPOSE

NURSCO 76

PULLMAN, WA

C. F. KONZAK

LABNUM	VARIETY	IDNO	CLASS	FASH	FYELD	FPROT	MABS	MABSC	MTYPE
				<u>1/</u>		<u>1/</u>		<u>3/</u>	
871797 WAMPUM		C1017691	HRS	0.43	77.7	10.8	63.9	64.1	4H
871798 WAVERLY		C1017911	SWS	0.40	77.7	10.6	57.0	57.4	3M
871799 WADUAL		WA7187	SWS	0.33	75.4	10.4	58.3	58.9	7M
LABNUM	VARIETY	IDNO	CLASS	WTIN	NOSCO	FABS	FPEAK	FSTAB	BABS
871797 WAMPUM		C1017691	HRS	345	65	58.7	6.8	11.2	64.6
871798 WAVERLY		C1017911	SWS	361	70	56.0	3.1	4.2	57.7
871799 WADUAL		WA7187	SWS	344	70	54.5	9.0	18.8	59.0
LABNUM	VARIETY	IDNO	CLASS	VISC	VISCC	CODI	CODIC	CAVOL	SCSOR
							<u>4/</u>		
871797 WAMPUM		C1017691	HRS	187	194	8.35	8.33	1215	69.0
871798 WAVERLY		C1017911	SWS	126	135	8.87	8.83	1225	68.0
871799 WADUAL		WA7187	SWS	244	272	8.61	8.55	1330	77.0
LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
				<u>3/</u>			<u>4/</u>		
871797 WAMPUM		C1017691	HRS	64.8	4.2	1030	1042	1	
871798 WAVERLY		C1017911	SWS	58.1	2.1	950	974	5	
871799 WADUAL		WA7187	SWS	59.6	4.4	1020	1056	1	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

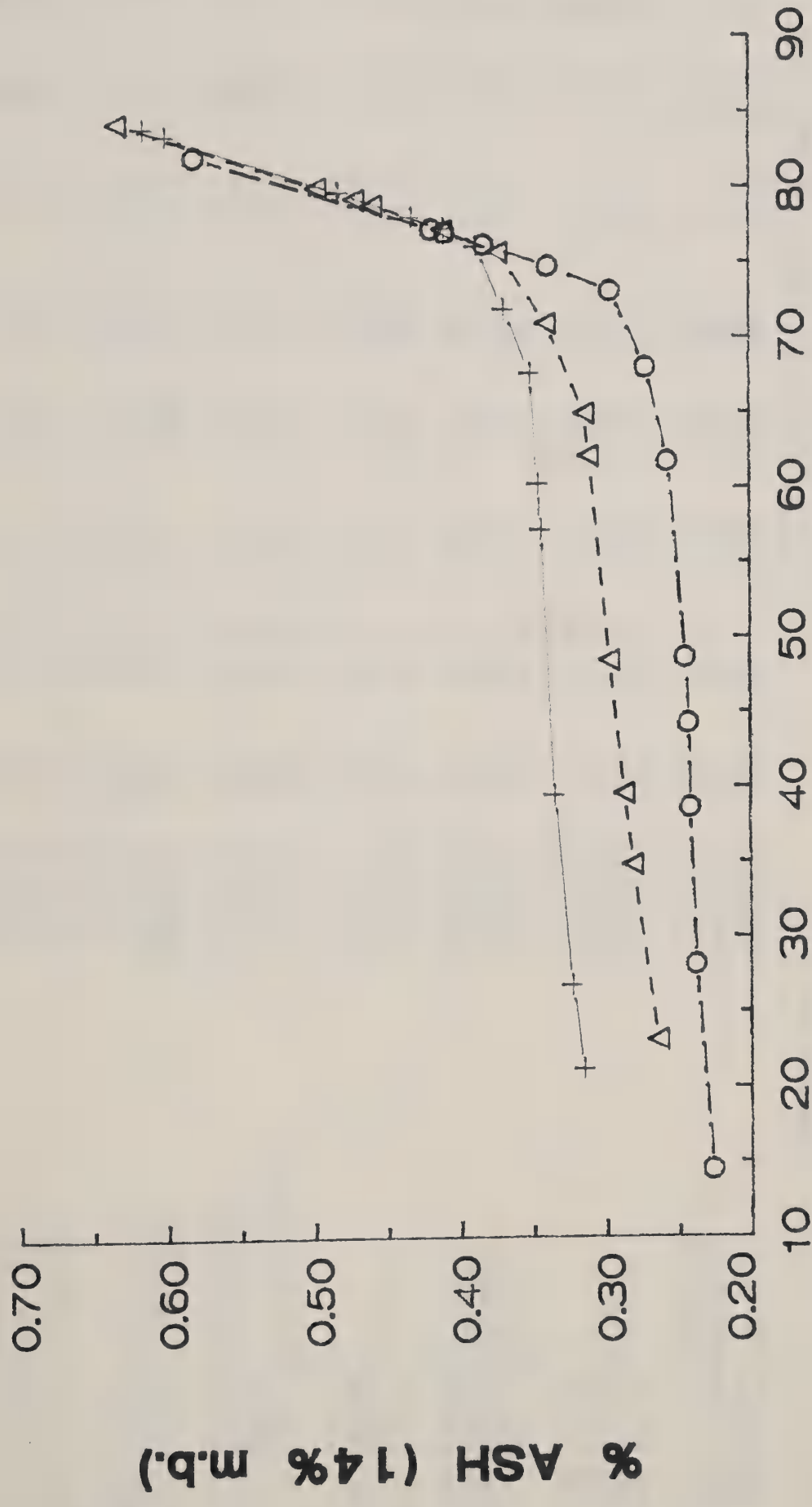
5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: These wheats were grown at Royal Slope, WA, in 1986. About 800 lbs. were milled on a Miag Multomat to provide flour for commercial pilot tests for both cookie and bread baking. Flour stream analysis and cumulative ash plots on page 2 indicate that WA7187 is equal to or superior to both Wampum and Waverly. WA7187 was smaller in cookie spread than Waverly, but very significantly better in sponge cake baking and near equal in noodle making. WA7187 was nearly identical to Wampum in loaf volume and bread crumb grain.

DUAL PURPOSE CUMULATIVE ASH

+---+ WAMPUM Δ--Δ WEVERLY O---O WA7187



% OF TOTAL PRODUCTS

NURSCO 77

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871800	WA5514//ITANA//CERCO	N8700602	HRW	60.0	71.6	0.38	87.5	14.2	63.0	4M
871801	WA5514//ITANA//CERCO	N8700605	HRW	56.8	70.6	0.44	82.9	15.4	62.5	3M
871802	WA5514//ITANA//CERCO	N8700606	HRW	59.6	71.5	0.36	88.1	12.8	60.3	3M
871803	WA5514//ITANA//ID092	N8700703	HRW	60.4	72.5	0.37	88.7	13.7	61.4	1H
871804	WA5514//ITANA//ID092	N8700704	HRW	60.0	72.0	0.37	88.3	14.2	61.5	2H
871805	HATTON	C1017772	HRW	62.4	73.5	0.36	90.2	13.1	68.5	4H
871806	WA5514//IT//HTN SIB	N8700903	HRW	61.6	72.9	0.31	92.1	12.9	66.1	3H
871807	VT890152//WA5839/CER	5/N8702701	HRW	60.4	73.0	0.34	90.8	13.2	69.1	4H
871808	N7701501//V72044/CER:	5/N8703104	HRW	60.4	72.2	0.36	89.2	13.2	67.9	5H
871809	N7701501//V72044/CER:	6/N8703101	HRW	59.2	71.2	0.38	87.0	12.8	67.2	3H
871810	N7701501//V72044/CER:	5/N8703102	HRW	59.6	71.3	0.38	87.1	13.4	67.5	3H
871811	N7701501//V72044/CER:	N8703103	HRW	61.6	64.4	0.36	80.7	13.3	68.5	3H
871812	HATTON	C1017772	HRW	62.8	73.1	0.36	89.9	13.1	69.5	3H
871813	14484//BNK/GNS/3/HTN SIB	6/N8701001	HRW	63.2	75.0	0.35	92.5	12.3	66.4	5H
871814	AMI/3/SU92/BURT/WSR	N8701201	HRW	61.6	72.8	0.35	90.3	14.0	69.8	2H
871815	WTN/WA6583	6/N8702001	HRW	61.2	72.7	0.35	89.8	13.4	70.5	4H
871816	HATTON	C1017772	HRW	62.4	72.8	0.36	89.8	13.0	70.1	4H
871817	WTN/WA6583	6/N8702101	HRW	61.6	73.2	0.38	88.8	14.6	70.2	2H
871818	VT890152//WA6584	6/N8702501	HRW	60.8	73.4	0.37	89.9	14.8	71.6	7H
871819	HATTON	C1017772	HRW	62.4	73.4	0.37	89.8	13.7	69.6	3H
871820	N7804301//N7703301	6/N8703201	HRW	60.4	70.9	0.41	85.0	14.6	70.5	2H
871821	C1017735//WA6584	6/N8703701	HRW	60.4	71.1	0.36	87.9	13.8	68.5	3H
871822	C1017735//N7903901	HRW	60.8	73.6	0.39	89.1	15.0	15.0	69.6	3H
871823	C1017735//N7903901	N8703801	HRW	60.8	74.4	0.39	89.5	14.7	69.6	5H
871824	C1017735//N7903901	N8703802	HRW	61.2	75.1	0.40	90.1	16.0	70.8	5H
871825	HATTON	C1017772	HRW	62.4	74.9	0.37	91.0	13.3	69.1	3H
871826	KVZ/AMI	N8701501	HRW	60.4	71.7	0.36	88.6	13.2	69.6	2H
871827	TCS/T1//SDY/3/KVZ	N8701701	HRW	60.4	72.9	0.33	91.3	13.6	66.7	2H
871828	NLY/YTO-117/TR	6/N8702401	HRW	60.4	70.5	0.34	88.3	14.3	69.4	4H
871829	HATTON	C1017772	HRW	62.4	72.8	0.35	90.2	12.8	66.9	2H
871830	ID51021//KVZ/ID5011	N8704702	HRW	60.4	68.7	0.33	86.6	13.6	63.1	2M
871831	ID51021//KVZ/ID5011	N8704701	HRW	60.0	67.8	0.34	85.3	14.2	65.2	1H
871832	WRG//CER/C1017271	N8704901	HRW	62.0	71.2	0.37	87.3	13.3	65.5	1H
871833	HATTON	C1017772	HRW	62.0	72.6	0.36	89.4	13.2	65.6	3H
871834	NE77663//WA6815	6/N8705203	HRW	62.4	74.0	0.33	92.6	13.9	67.1	5H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 14% Protein.

4/ Observed Values Corrected to 14% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

PRELIMINARY WINTER WHEAT

NURSCO 77

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
871800	WA5514/ITANA//CERCO	N8700602	HRW	63.9	63.7	2.3	890	878	5 P-LVOL Q-MT&BCRGR	
871801	WA5514/ITANA//CERCO	N8700605	HRW	63.6	62.2	1.9	900	813	8 P-FYELD, LVOL&BCRGR	
871802	WA5514/ITANA//CERCO	N8700606	HRW	59.8	61.0	1.9	745	819	9 P-MT, LVOL&BCRGR	
871803	WA5514/ITANA//ID092	N8700703	HRW	61.8	62.1	1.4	790	809	9 P-" "	
871804	WA5514/ITANA//ID092	N8700704	HRW	61.4	61.2	1.9	965	953	5 P-MTIME Q-BCRGR	
871805	HATTON	C1017772	HRW	68.3	69.2	3.5	980	1036	4	
871806	WA5514/IT//HTN SIB	N8700903	HRW	65.7	56.8	2.6	880	948	4 Q-MT&BCRGR	
871807	VT890152//WA5839/CER	N8702701	HRW	69.0	69.8	4.0	1105	1155	1	
871808	N7701501//V72044/CER:	N8703104	HRW	67.8	68.6	4.4	1025	1075	1	
871809	N7701501//V72044/CER:	N8703101	HRW	66.7	67.9	3.7	1025	1099	2	
871810	N7701501//V72044/CER:	N8703102	HRW	66.6	67.2	3.3	1080	1117	2	
871811	N7701501//V72044/CER:	N8703103	HRW	67.5	68.2	3.4	1010	1053	3 P-FYELD	
871812	HATTON	C1017772	HRW	68.3	69.2	4.0	965	1021	2	
871813	14484//BNK/GNS/3/HTN SIB	N8701001	HRW	64.4	66.1	5.6	950	1055	3	
871814	AM1/3/SU92/BURT/WSR	N8701201	HRW	69.5	69.5	2.0	1070	1070	5 Q-BCRGR	
871815	WTN/WA6583	N8702001	HRW	68.6	69.2	3.5	1065	1102	3	
871816	HATTON	C1017772	HRW	67.8	68.8	3.9	930	992	6	
871817	WTN/WA6583	N8702101	HRW	70.5	69.9	2.5	1085	1048	3	
871818	VT890152/WA6584	N8702501	HRW	70.1	69.3	6.6	1000	950	3 Q-LVOL	
871819	HATTON	C1017772	HRW	67.5	67.8	3.4	975	994	2	
871820	N7804301/N7703301	N8703201	HRW	69.3	68.7	1.9	1075	1038	2 Q-FYELD	
871821	C1017735/WA6584	N8703701	HRW	65.5	65.7	2.8	1035	1047	2	
871822	C1017735/N7903901	N8703803	HRW	68.3	67.3	3.5	1010	948	3 Q-LVOL	
871823	C1017735/N7903901	N8703801	HRW	70.0	69.3	5.0	975	932	3 P-LVOL	
871824	C1017735/N7903901	N8703802	HRW	71.5	69.5	6.1	1045	921	3 P-LVOL Excellent Prot.	
871825	HATTON	C1017772	HRW	68.1	68.8	3.3	1000	1043	2	
871826	KVZ/AMI	N8701501	HRW	68.5	69.3	2.0	935	985	6 P-MTIME&BCRGR	
871827	TCS/TI//SDY/3/KVZ	N8701701	HRW	66.0	66.4	1.5	900	925	8 P-MTIME, LVOL&BCRGR	
871828	NLY/YTO-117/TR	N8702401	HRW	69.4	69.1	4.1	975	956	2 Q-LVOL	
871829	HATTON	C1017772	HRW	65.4	66.6	2.8	980	1054	2	
871830	ID51021//KVZ/ID5011	N8704702	HRW	62.4	62.8	1.2	700	725	9 P-FYELD, MT, LVOL&BCRGR	
871831	ID51021//KVZ/ID5011	N8704701	HRW	65.1	64.9	1.2	775	763	9 P-" "	
871832	WRG//CER/C1017271	N8704901	HRW	64.5	65.2	1.4	880	923	8 P-" "	
871833	HATTON	C1017772	HRW	64.5	65.3	3.0	995	1045	1	
871834	NET7663/WA6815	N8705203	HRW	66.7	66.8	4.3	960	966	2 Q-LVOL	

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

PRELIMINARY WINTER WHEAT

NURSCO 77

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/ 3/		1/ 3/		
871835	NE77663/WA6815	6/N8705204	HRW	61.6	74.2	0.33	92.6	13.8	66.3	3H
871836	NE77663/WA6815	6/N8705201	HRW	61.6	73.0	0.32	91.7	13.5	66.6	4H
871837	NE77663/WA6815	6/N8705202	HRW	61.6	73.4	0.35	90.8	14.3	66.7	2H
871838	KVZ/17271//ID178	6/N8706702	HRW	60.4	73.3	0.36	90.1	12.8	66.2	3H
871839	N81022/WA6818	5/N8707201	HRW	58.4	73.5	0.35	90.6	13.9	67.1	2H
871840	HATTON	C1017772	HRW	62.0	73.3	0.36	90.2	13.3	67.9	4H
871841	N81024/WTN	N8707503	HRW	60.8	71.9	0.34	89.7	14.2	66.5	2H
871842	N81024/WTN	6/N8707501	HRW	62.0	72.9	0.37	89.0	14.6	66.7	2H
871843	NSR/286011//SDY/ID5010	6/N8708201	HRW	62.0	70.8	0.38	86.7	14.7	70.5	7H
871844	NSR/286011//SDY/ID5010	6/N8708202	HRW	61.6	70.6	0.37	86.9	13.6	68.0	4H
871845	NSR/286011//SDY/ID5010	6/N8708204	HRW	62.0	74.4	0.35	92.0	13.9	67.8	2H
871846	NSR/CER//MNG	6/N8708301	HRW	61.2	73.6	0.36	90.4	14.6	67.2	2H
871847	NSR/CER//SXW321	6/N8708401	HRW	62.0	71.1	0.38	86.8	15.3	69.7	7H
871848	NSR/STK//NLY	6/N8708503	HRW	62.0	73.4	0.39	88.6	15.2	68.9	5H
871849	NSR/STK//NLY	N8708501	HRW	60.4	72.2	0.37	88.2	13.5	68.8	2H
871850	NSR/STK//NLY	N8708502	HRW	61.6	72.8	0.35	90.1	13.8	66.6	1H
871851	HATTON	C1017772	HRW	62.4	72.3	0.37	88.3	13.5	67.3	3H
871852	OMAR MUT/HELME//SXW321	6/N8708803	HRW	60.4	70.5	0.36	87.2	14.3	68.6	4H
871853	WA6817/LJM	N8708903	HRW	60.0	73.6	0.38	89.6	12.0	66.0	4H
871854	WA6817/LJM	N8708901	HRW	60.4	72.8	0.37	89.1	12.2	65.6	3H
871855	N80097//ID51022	N8704101	HRW	61.2	71.9	0.36	88.8	13.0	67.6	3H
871856	N80097//ID51022	5/N8704102	HRW	60.8	71.5	0.33	89.7	13.5	68.9	4H
871857	N80097//ID51022	5/N8704103	HRW	61.2	72.5	0.35	89.9	13.2	67.8	5H
871858	REGO/CNN//WN/3/BATUM	6/N8704802	HRW	60.8	71.9	0.36	88.8	13.6	67.7	2H
871859	REGO/CNN//WN/3/BATUM	6/N8704801	HRW	61.6	75.0	0.35	92.5	14.0	67.6	5H
871860	NE7763/3/KVZ//9342/IT	N8705301	HRW	60.8	67.3	0.31	86.6	13.4	68.0	5H
871861	HATTON	C1017772	HRW	62.4	71.3	0.37	87.5	13.4	68.0	2H
871862	MIR 808/2*CTK78//SXW321	N8705402	HRW	60.4	68.9	0.33	87.3	14.2	69.1	4H
871863	MIR 808/2*CTK78//SXW321	6/N8705403	HRW	63.6	71.7	0.35	89.1	14.9	68.5	3H
871864	MIR 808/2*CTK78//SXW321	6/N8705401	HRW	60.8	72.1	0.36	88.7	15.3	68.2	4H
871865	PYN/AMI1//WA5840/CER	N8705501	HRW	62.4	70.2	0.34	88.1	12.7	65.3	2H
871866	N7800205/KVZ	N8706101	HRW	59.6	72.3	0.36	89.0	13.6	64.2	2H
871867	CER/17271//N8106003	6/N8706301	HRW	60.0	72.6	0.36	89.4	14.9	67.1	3H
871868	CER/17271//N8106003	6/N8706303	HRW	59.6	72.6	0.35	89.7	14.4	66.1	3H
871869	N7802901/N8110303	N8706401	HRW	61.2	70.1	0.37	86.1	13.6	68.4	4H

NURSCO 77

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
871835	NE77663/WA6815	N8705204	HRW	65.8	66.0	2.6	950	962		2Q-MTIME
871836	NE77663/WA6815	N8705201	HRW	65.8	66.3	3.2	910	941		3Q-LVOL
871837	NE77663/WA6815	N8705202	HRW	66.7	66.4	2.3	1015	996		2
871838	KVZ/17271//ID178	N8706702	HRW	64.7	65.9	2.8	905	979		2
871839	N81022/WA6818	N8707201	HRW	65.2	65.3	1.5	1025	1031		2
871840	HATTON	C1017772	HRW	65.9	66.6	3.2	920	963		4
871841	N81024/WTN	N8707503	HRW	64.9	64.7	1.7	975	963		4 P-MTIME Q-BCRGR
871842	N81024/WTN	N8707501	HRW	67.0	66.4	2.8	1030	993		4
871843	NSR/286011//SDY/ID5010	N8708201	HRW	70.9	70.2	6.8	1065	1022		2 Q-FYELD
871844	NSR/286011//SDY/ID5010	N8708202	HRW	67.3	67.7	3.9	1080	1105		4
871845	NSR/286011//SDY/ID5010	N8708204	HRW	66.4	66.5	2.5	985	991		4 Q-MTIME
871846	NSR/CER//MNG	N8708301	HRW	67.5	66.9	2.6	1100	1063		2 Q-MTIME
871847	NSR/CER//SXW321	N8708401	HRW	69.7	68.4	7.7	1155	1074		2
871848	NSR/STK//NLV	N8708503	HRW	68.8	67.6	4.7	1050	976		5 Q-BCRGR
871849	NSR/STK//NLV	N8708501	HRW	67.0	67.5	2.2	1070	1101		5 P-MTIME Q-BCRGR
871850	NSR/STK//NLV	N8708502	HRW	66.1	66.3	1.5	910	922		8 P-MTIME, LVOL&BCRGR
871851	HATTON	C1017772	HRW	66.5	67.0	3.1	995	1026		2
871852	OMAR MUT/HELME//SXW321	N8708803	HRW	68.1	67.8	3.5	1060	1041		2
871853	WA6817/LJM	N8708903	HRW	63.7	65.7	3.5	885	1009		6 P-BCRGR
871854	WA6817/LJM	N8708901	HRW	63.5	65.3	3.0	875	987		5 P-BCRGR
871855	N80097//ID51022	N8704101	HRW	66.8	67.8	2.5	945	1007		4 Q-BCRGR
871856	N80097//ID51022	N8704102	HRW	68.6	69.1	3.4	1050	1081		2
871857	N80097//ID51022	N8704103	HRW	66.7	67.5	4.2	1060	1110		2
871858	REGO/CNN//WN/3/BATUM	N8704802	HRW	66.5	66.9	2.0	1055	1080		2 Q-MTIME
871859	REGO/CNN//WN/3/BATUM	N8704801	HRW	67.3	67.3	4.3	980	980		2 Q-BCRGR
871860	NE7763/3/KVZ//9342/IT	N8705301	HRW	67.1	67.7	4.4	1000	1037		2 P-FYELD
871861	HATTON	C1017772	HRW	66.1	66.7	2.2	1020	1057		3
871862	MIR 808/2*CTK78//SXW321	N8705402	HRW	69.0	68.8	3.1	950	938		4 Q-FYELD&BCRGR
871863	MIR 808/2*CTK78//SXW321	N8705403	HRW	69.1	68.2	2.8	1055	999		3
871864	MIR 808/2*CTK78//SXW321	N8705401	HRW	69.2	67.9	3.5	1015	934		2 Q-LVOL
871865	PYN/AMI//WA5840/CER	N8705501	HRW	63.2	64.5	2.1	965	1046		5 P-MTIME Q-BCRGR
871866	N7800205/KVZ	N8706101	HRW	63.0	63.4	2.6	965	990		5 Q-MTIME&BCRGR
871867	CER/17271//N8106003	N8706301	HRW	67.7	66.8	3.1	1010	954		2 Q-LVOL
871868	CER/17271//N8106003	N8706303	HRW	66.2	65.8	3.0	1020	995		2 Q-LVOL
871869	N7802901/N8110303	N8706401	HRW	67.7	68.1	2.6	965	990		2 Q-MTIME&LVOL

NURSCO 77

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/ 1/		1/ 1/	3/ 3/	
871870	N7904301/NSR	5/ N8707001	HRW	61.2	75.0	0.36	92.1	13.5	67.4	3H
871871	HATTON	C1017772	HRW	62.4	72.3	0.36	88.8	13.5	66.4	2H
871872	N81026/N8110401	N8707808	HRW	61.6	73.6	0.38	89.3	14.8	66.9	2H
871873	N81026/N8110401	N8707805	HRW	60.8	73.8	0.37	90.1	15.2	65.5	1H
871874	N81026/N8110401	N8707806	HRW	61.2	73.0	0.37	89.5	14.7	66.6	1H
871875	N81026/N8110401	N8707807	HRW	61.2	73.1	0.37	89.5	14.7	67.4	2H
871876	ID51022/WA6815	N8704602	HRW	62.4	72.0	0.36	89.0	14.3	67.9	2H
871877	ID51022/WA6815	N8704601	HRW	62.0	75.1	0.35	92.7	14.0	68.7	5H
871878	VPM/MC//ID178	N8705901	HRW	59.6	71.7	0.37	87.8	14.1	68.1	7H
871879	HATTON	C1017772	HRW	62.4	72.1	0.38	87.8	13.7	67.9	3H
871880	VPM/MC//ID178	N8705902	HRW	60.4	71.8	0.36	88.3	14.9	68.0	3H
871881	N7800205/N7902501	N8706001	HRW	61.2	72.5	0.36	89.4	13.8	66.9	2H
871882	KVZ/WA5836//ID3518	N8706901	HRW	60.0	70.2	0.37	86.1	14.4	68.0	3H
871883	KVZ/WA5836//ID3518	N8706902	HRW	60.4	71.9	0.35	88.9	14.2	66.7	2H
871884	KVZ/WA5836//ID3518	N8706903	HRW	58.0	71.6	0.37	87.8	15.4	68.0	2H
871885	N7904302/NSR	N8707101	HRW	60.4	73.4	0.36	90.0	14.0	67.2	3H
871886	N7904302/NSR	N8707102	HRW	61.6	73.1	0.35	90.4	13.8	67.9	4H
871887	N7904302/NSR	N8707103	HRW	60.8	70.1	0.38	85.7	14.2	67.5	4H
871888	N81022/KVZ	N8707301	HRW	60.4	72.0	0.35	89.4	13.1	68.3	4H
871889	N81022/KVZ	N8707302	HRW	61.6	72.3	0.34	90.3	13.1	68.1	4H
871890	N81022/KVZ	N8707303	HRW	61.2	71.6	0.34	89.3	13.4	67.8	4H
871891	N81022/KVZ	N8707304	HRW	60.4	72.3	0.36	88.9	14.3	68.4	3H
871892	N81022/KVZ	N8707306	HRW	60.4	72.6	0.37	89.1	13.5	68.2	2H
871893	HATTON	C1017772	HRW	62.0	71.2	0.37	87.2	13.8	68.9	3H
871894	N81025/CTK78	N8707602	HRW	60.8	71.8	0.36	88.7	14.5	67.8	2H
871895	N81025/CTK78	N8707603	HRW	60.4	71.7	0.37	87.8	14.0	67.4	6H
871896	N81025/CTK78	N8707601	HRW	61.2	71.4	0.45	83.7	13.8	65.0	2H
871897	N81025/N8110201	N8707701	HRW	59.2	69.5	0.35	86.8	14.8	67.4	2H
871898	N81025/N8110201	N8707702	HRW	60.0	71.6	0.36	88.3	15.0	65.5	2H
871899	N81025/N8110201	N8707703	HRW	60.4	72.8	0.35	89.9	14.4	68.3	2H
871900	N81025/N8110201	N8707704	HRW	59.6	73.3	0.35	90.8	14.2	66.0	2H
871901	N81026/N8110401	N8707809	HRW	60.0	71.6	0.36	88.1	14.3	67.0	2H
871902	N81026/N8110401	N8707801	HRW	60.8	72.3	0.37	88.6	14.7	67.0	2H
871903	N81026/N8110401	N8707802	HRW	60.0	71.7	0.37	88.1	14.7	68.3	4H
871904	N81026/N8110401	N8707804	HRW	60.8	70.4	0.35	87.5	13.8	67.4	2H

NURSCO 77

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
871870	N7904301/NSR	N8707001	HRW	66.6	67.1	4.5	1035	1066	2	
871871	HATTON	C1017772	HRW	65.1	65.6	2.6	1000	1031	3	
871872	N81026/N8110401	N8707808	HRW	66.9	66.1	1.8	975	925	5	Q-MTIME, LVOL&BCRGR
871873	N81026/N8110401	N8707805	HRW	65.9	64.7	1.4	855	781	6	P- " Q-BCRGR
871874	N81026/N8110401	N8707806	HRW	66.5	65.8	1.5	1010	967	4	P- " Q-BCRGR
871875	N81026/N8110401	N8707807	HRW	65.3	64.6	1.8	1015	972	4	P- " Q- "
871876	ID51022/WA6815	N8704602	HRW	65.4	65.1	1.5	980	961	4	P- " Q- "
871877	ID51022/WA6815	N8704601	HRW	66.4	66.4	4.4	1040	1040	2	
871878	VPM/MC//ID178	N8705901	HRW	65.9	65.8	8.3	1000	994	2	Long Mixing
871879	HATTON	C1017772	HRW	67.3	67.6	3.1	1045	1064	3	
871880	VPM/MC//ID178	N8705902	HRW	68.6	67.7	3.6	1035	979	2	Q-LVOL
871881	N7800205/N7902501	N8706001	HRW	65.4	65.6	1.8	895	907	4	P-MT, LVOL&BCRGR
871882	KVZ/WA5836//ID3518	N8706901	HRW	68.1	67.7	2.8	1010	985	2	Q-FYELD&LVOL
871883	KVZ/WA5836//ID3518	N8706902	HRW	66.6	66.4	2.3	1005	993	2	Q-MTIME&LVOL
871884	KVZ/WA5836//ID3518	N8706903	HRW	67.6	66.2	2.0	990	903	4	P-MT, LVOL&BCRGR
871885	N7904302/NSR	N8707101	HRW	65.9	65.9	3.6	980	980	2	Q-LVOL
871886	N7904302/NSR	N8707102	HRW	67.4	67.6	4.0	1000	1012	2	
871887	N7904302/NSR	N8707103	HRW	67.4	67.2	3.4	985	973	3	Q-FYELD&LVOL
871888	N81022/KVZ	N8707301	HRW	67.1	68.0	3.3	920	976	3	Q-LVOL
871889	N81022/KVZ	N8707302	HRW	66.9	67.8	3.7	900	956	3	P-LVOL
871890	N81022/KVZ	N8707303	HRW	66.9	67.5	3.3	925	962	4	P- " &BCRGR
871891	N81022/KVZ	N8707304	HRW	67.4	67.1	2.6	1055	1036	3	
871892	N81022/KVZ	N8707306	HRW	65.9	66.4	2.0	995	1026	3	
871893	HATTON	C1017772	HRW	67.4	67.6	3.0	990	1002	4	
871894	N81025/CTK78	N8707602	HRW	67.5	67.0	2.3	1080	1049	6	P-MTIME&BCRGR
871895	N81025/CTK78	N8707603	HRW	67.1	67.1	5.8	965	965	4	Q-LVOL
871896	N81025/CTK78	N8707601	HRW	64.5	64.7	3.1	955	967	4	Q- "
871897	N81025/N8110201	N8707701	HRW	66.9	66.1	2.5	1025	975	4	Q-FYELD, MTIME&BCRGR
871898	N81025/N8110201	N8707702	HRW	66.2	65.2	2.2	965	903	5	P-MTIME, LVOL&BCRGR
871899	N81025/N8110201	N8707703	HRW	67.9	67.5	2.1	1015	990	5	P- " &BCRGR
871900	N81025/N8110201	N8707704	HRW	64.4	64.2	1.8	1050	1038	3	P-MTIME
871901	N81026/N8110401	N8707809	HRW	66.5	66.2	2.0	1035	1016	4	P- "
871902	N81026/N8110401	N8707801	HRW	64.9	64.2	1.5	1100	1057	4	P- "
871903	N81026/N8110401	N8707802	HRW	68.2	67.5	3.6	1050	1007	3	
871904	N81026/N8110401	N8707804	HRW	65.4	65.6	3.0	975	987	5	Q-BCRGR

NURSCO 77

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/ 3/		1/ 3/		
871905	N80079/N7900701	6/N8703901	HRW	62.8	75.0	0.44	87.7	13.9	66.3	4H
871906	NE75424/ID51021	N8705001	HRW	61.2	67.7	0.35	87.2	15.5	69.0	3H
871907	NE75424/ID51021	6/N8705002	HRW	62.0	72.8	0.30	89.9	14.9	69.9	4H
871908	HATTON	C1017772	HRW	62.0	72.5	0.36	89.3	13.8	68.1	3H
871909	NE75424/ID51021	N8705003	HRW	61.6	72.0	0.38	87.9	14.7	69.2	2H
871910	NE75424/ID51021	N8705004	HRW	60.8	70.9	0.36	87.5	15.7	72.2	3H
871911	286011/CDN//KVZ/ID5011	6/N8706201	HRW	60.4	70.5	0.36	87.1	13.4	67.3	5H
871912	286011/CDN//KVZ/ID5011	6/N8706204	HRW	60.4	69.5	0.37	85.7	14.3	68.4	4H
871913		6/N8700101	HRW	61.2	71.9	0.36	88.7	14.6	71.1	4H
871914		6/N8700301	HRW	61.2	71.9	0.36	88.6	14.6	69.3	4H
871915	HATTON	C1017772	HRW	61.6	71.6	0.38	87.5	14.1	68.6	3H
871916	BATUM/KVZ	N8705701	HRW	60.8	73.2	0.34	90.9	14.4	66.1	3H
871917	N7000063/K71056//UT92712	N8703401	HRW	61.6	73.7	0.40	88.4	14.4	67.6	3H
871918	N7000063/K71056//N780440	6/N8703501	HRW	60.4	69.1	0.35	86.2	15.1	70.9	5H
871919	PNY/AMI//N7905901	N8705601	HRW	60.8	71.3	0.37	87.7	15.0	68.2	1H
871920	BATUM/KVZ	6/N8705702	HRW	60.0	69.5	0.40	84.2	14.3	69.1	4H
871921	OMAR MUT/HELME//SXW321	N8708804	HRW	61.6	68.7	0.43	81.8	13.6	63.3	2H
871922	WA6817/LJN	N8708902	HRW	60.8	68.5	0.39	83.3	13.7	65.6	1H
871923	HATTON	C1017772	HRW	61.2	71.3	0.39	86.5	14.0	65.7	2H
871924	N7501402/N7900403	N8704401	SRW	61.6	67.0	0.42	79.4	12.6	59.9	2H
871925	N80095/N7901201	5/N8704001	HRW	60.0	71.6	0.36	88.1	14.2	66.1	4H
871926	N70097/ID51022	6/N8704104	HRW	60.8	70.2	0.37	86.3	13.2	66.5	5H
871927	ID178/3/SDY/TCS//CTK	N8704501	HRW	60.0	73.7	0.42	87.3	14.2	64.7	2H
871928	NE 77663/WA6815	N8705205	HRW	60.4	72.8	0.34	90.9	14.8	66.0	3H
871929	HATTON	C1017772	HRW	61.6	71.6	0.37	87.7	13.6	66.4	3H
871930	MIR808/2*CTK78//SXW321	N8705404	HRW	60.0	70.5	0.33	89.0	14.4	68.3	5H
871931	MIR808/2*CTK78//SXW321	N8705405	HRW	61.6	70.7	0.31	89.9	15.2	68.0	3H
871932	286011/CDN//KVZ/ID5011	N8706202	HRW	59.2	67.8	0.33	85.8	14.9	66.8	3H
871933	CER/17271//N8106003	N8706302	HRW	61.6	72.8	0.33	91.3	14.0	66.4	3H
871934	N7900201/WRG	N8706501	HRW	60.8	71.7	0.33	90.1	14.0	66.0	2H
871935	N7900202/WA6818	N8706601	HRW	60.8	71.8	0.36	88.7	13.4	64.4	1H
871936	KVZ/17271//ID178	N8706701	HRW	60.8	70.4	0.35	87.9	14.3	65.0	2H
871937	N81022/KVZ	N8707305	HRW	60.0	70.1	0.35	87.1	15.1	64.8	1H
871938	N81024/WTN	6/N8707502	HRW	60.8	72.3	0.38	88.2	15.0	66.7	2H
871939	N81028/HTN	N8707901	HRW	60.0	72.7	0.38	88.2	14.0	63.8	1H

NURSCO 77

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
871905	N80079/N7900701	N8703901	HRW	65.4	65.5	4.1	965	971	3 Q-LVOL	
871906	NE75424/ID51021	N8705001	HRW	69.7	68.2	2.1	1075	982	2 P-FYELD&MTIME	
871907	NE75424/ID51021	N8705002	HRW	69.0	68.1	3.1	1000	944	2 Q-LVOL	
871908	HATTON	C1017772	HRW	66.6	66.8	2.9	990	1002	3	
871909	NE75424/ID51021	N8705003	HRW	69.6	68.9	2.0	1070	1027	3 P-MTIME	
871910	NE75424/ID51021	N8705004	HRW	72.6	70.9	2.3	1080	975	2 P-MTIME	
871911	286011/CDN//KVZ/ID5011	N8706201	HRW	66.9	67.5	4.0	980	1017	2 Q-FYELD	
871912	286011/CDN//KVZ/ID5011	N8706204	HRW	68.4	68.1	3.5	1030	1011	2 Q-	
871913		N8700101	HRW	71.4	70.8	3.7	1015	978	2	
871914		N8700301	HRW	69.6	69.0	3.4	1035	998	3	
871915	HATTON	C1017772	HRW	67.4	67.3	2.9	1030	1024	3	
871916	BATUM/KVZ	N8705701	HRW	66.2	65.8	2.5	940	915	3 Q-MTIME&LVOL	
871917	N7000063/K71056//UT92712	N8703401	HRW	67.7	67.3	3.6	1020	995	2	
871918	N7000063/K71056//N780440	N8703501	HRW	71.7	70.6	4.2	1100	1032	2 Q-FYELD	
871919	PNY/AMI//N7905901	N8705601	HRW	68.4	67.4	1.4	995	933	8 P-MTIME, LVOL&BCRGR	
871920	BATUM/KVZ	N8705702	HRW	69.1	68.8	3.4	1085	1066	2 Q-FYELD	
871921	OMAR MUT/HELME//SXW321	N8708804	HRW	62.1	62.5	2.2	755	780	8 P-FYELD, MT, LVOL&BCRGR	
871922	WA6817/LJN	N8708902	HRW	64.5	64.8	1.3	865	884	8 P-	
871923	HATTON	C1017772	HRW	64.9	64.9	2.4	1035	1035	3	
871924	N7501402/N7900403	N8704401	SRW	57.7	59.1	2.3	1010	1094	4 P-	" (soft
871925	N80095/N7901201	N8704001	HRW	66.0	65.8	4.0	1120	1108	2	
871926	N70097/ID51022	N8704104	HRW	65.4	66.2	3.9	1010	1060	3	
871927	ID178/3/SDY/TCS//CTK	N8704501	HRW	64.1	63.9	2.6	990	978	4 Q-MTIME&BCRGR	
871928	NE 77663/WA6815	N8705205	HRW	66.0	65.2	2.8	1000	950	3 Q-LVOL	
871929	HATTON	C1017772	HRW	65.2	65.6	2.5	980	1005	3	
871930	MIR808/2*CTK78//SXW321	N8705404	HRW	68.4	68.0	5.0	990	965	2 Q-FYELD&LVOL	
871931	MIR808/2*CTK78//SXW321	N8705405	HRW	68.4	67.2	2.6	1005	931	3 Q-	
871932	286011/CDN//KVZ/ID5011	N8706202	HRW	67.4	66.5	3.6	1060	1004	2 P-FYELD	
871933	CER/17271//N8106003	N8706302	HRW	65.6	65.6	2.6	950	950	5 Q-MTIME, LVOL&BCRGR	
871934	N7900201/WRG	N8706501	HRW	65.2	65.2	1.4	935	935	6 P-	"
871935	N7900202/WA6818	N8706601	HRW	63.0	63.6	1.3	900	937	9 P-	"
871936	KVZ/17271//ID178	N8706701	HRW	64.5	64.2	2.0	955	936	8 P-	"
871937	N81022/KVZ	N8707305	HRW	64.1	63.0	1.0	1010	942	8 P-	"
871938	N81024/WTN	N8707502	HRW	66.9	65.9	2.3	1100	1038	3 Q-MTIME	
871939	N81028/HTN	N8707901	HRW	63.0	63.0	1.3	950	950	8 P-	"

NURSCO 77

LIND, WA

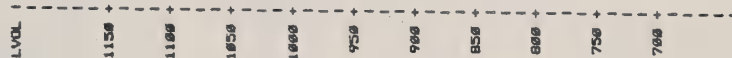
E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
871940	N81030/9342/GNS	N8708001	HRW	59.6	72.0	0.33	90.1	13.6	63.1	1H
871941	N81030/9342/GNS	6/ N8708002	HRW	62.0	71.8	0.34	89.6	13.5	65.3	4H
871942	N81129/N8110301	N8708701	HRW	60.4	70.6	0.39	85.7	15.2	65.3	2H
871943	OMAR MUT/HELME	N8708802	HRW	60.0	70.9	0.39	86.2	16.4	62.3	1H
871944	N81117/NSR//SXW321	N8708601	HRW	59.6	67.2	0.39	82.2	15.0	66.3	3H
871945	HATTON	C1017772	HRW	61.6	70.5	0.37	86.5	14.1	64.7	2H

E. DONALDSON

COMMENTS: The protein of the selections in this nursery were very good, most being higher than Hatton. The milling quality of most selections were good. The average for flour yield and milling score for the 18 Hatton checks were 72.3 and 88.8, respectively. Baking quality varied widely among the selections as indicated in the plot of loaf volume vs. flour protein, to the right, where the correlation coefficient was only $r = .36$. See "Remarks" for major deficiencies. Note that some selections footnoted as promising do have some questionable characteristics, but may be worthy of further testing.

Plot of LVOL*FPROT Legend: A = 1 obs, B = 2 obs, etc.



FPROT

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

PETERSON'S WHITES

C.J. PETERSON

NURSCO 78

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS
						<u>1/</u>		<u>1/</u>	<u>3/</u>		
871946	BLADE		<u>6/</u> HWS	62.4	71.5	0.33	89.7	11.3	63.5	3H	65.0
871947	SPEAR		HWS	60.8	69.6	0.37	85.6	9.5	62.3	4M	62.5
871948	DAGGAR		HWS	61.6	70.6	0.38	86.2	10.4	62.6	4M	62.7

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	RMKS
				<u>3/</u>			<u>4/</u>			<u>4/</u>	
871946	BLADE		HWS	63.7	3.1	1055	974	3	8.36	8.47	
871947	SPEAR		HWS	63.0	2.6	915	946	6	8.34	8.30	Q-MTIME&BCRGR
871948	DAGGAR		HWS	62.3	2.5	895	870	6	8.24	8.27	Q-MTIME&BCRGR

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: Of these three HWS wheats, Blade appears most promising. It is excellent in milling and baked a good loaf of bread. Crumb grain was slightly open but acceptable. Both Spear and Daggar were questionable in mixing properties and heavy in crumb structure. None had soft wheat properties.

NURSCO 79 and 111

LABNUM	VARIETY	IDNO	CLASS	FASH	FYIELD	FPROT	MABSC	MTYPE	FABS	FPEAK	FSTAB
871949 87-1			6/HRS	0.43	77.7	12.6	70.5	3H	67.6	9.0	13.3
871950 87-3			HRS	0.42	76.0	11.7	69.9	6H	64.3	13.8	32.5
871951 87-4			5/HRS	0.45	77.1	13.2	70.2	5H	66.9	12.0	31.0
871952 87-5			6/HRS	0.49	78.2	11.8	68.6	7H	54.4	8.3	29.6
370865 87-2			6/HRS	0.37	*	11.4	65.9	7H	53.7	13.5	26.7
370866 87-6			6/HRS	0.40	*	12.6	65.6	7H	54.2	12.0	29.5

1/ Observed Values Corrected to 145 Moisture Basis.3/ Absorption at 14% Moisture Corrected to 12% Protein.4/ Observed Values Corrected to 12% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

* Milled at the USDA, ARS, WRRC, Albany, CA.

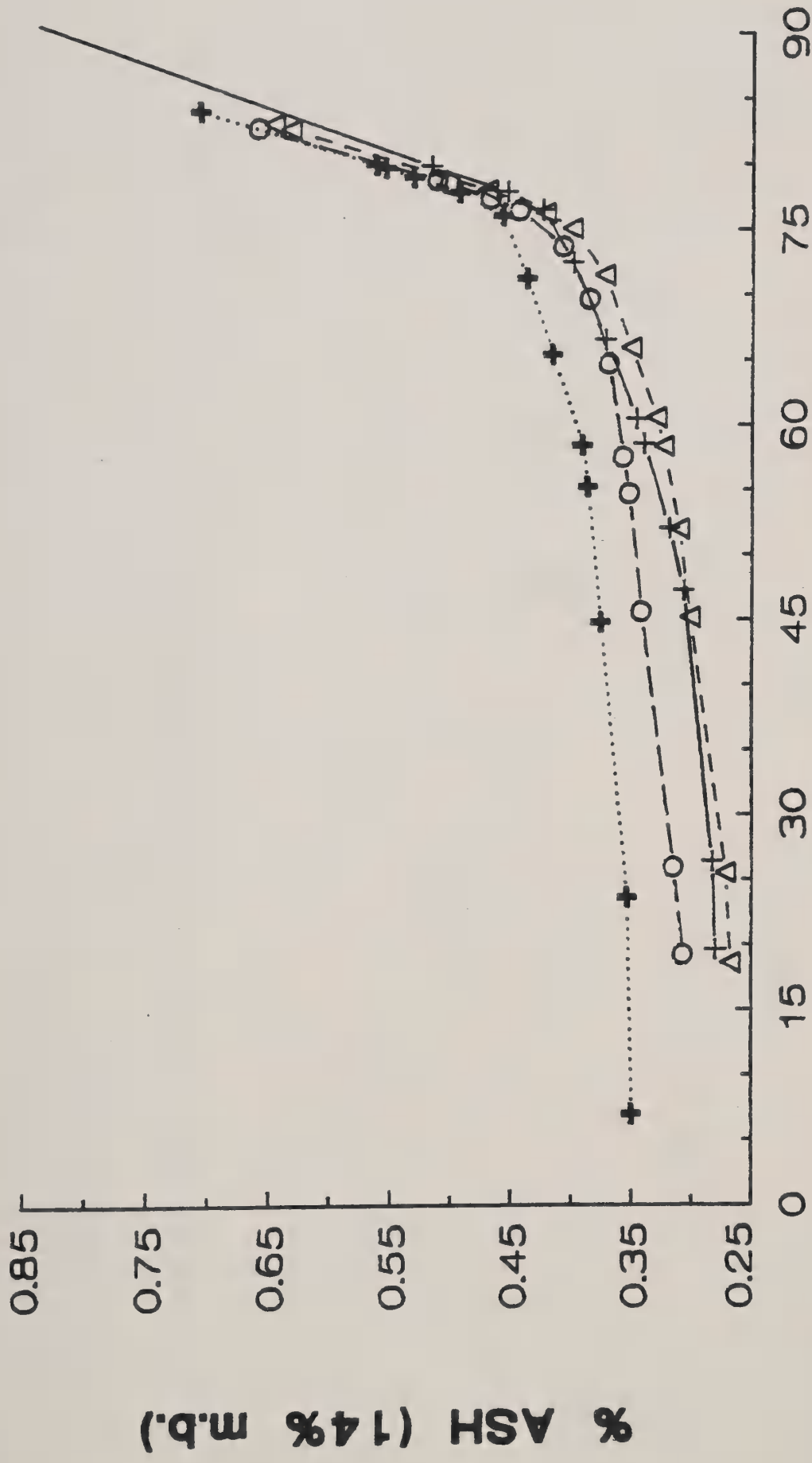
NURSCO 79 and 111

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
871949 87-1			HRS	71.8	71.2	2.9	1050	1013	2	Q-BCRGR, Low LVOL
871950 87-3			HRS	71.3	71.6	5.1	875	894	4	Q-LVOL
871951 87-4			HRS	73.1	71.9	5.5	970	896	2	Q-LVOL
871952 87-5			HRS	69.1	69.3	10.1	975	987	1	Too long mixing time.
370865 87-2			HRS	66.0	66.6	8.0	930	967	1	Too long mixing time.
370866 87-6			HRS	66.9	66.3	8.1	1020	983	1	Too long mixing time.

COMMENTS: These samples were pilot milled and baked in cooperation with the California Wheat Commission. All selections except 87-3 were scored as promising despite concern over the excessively long mixing requirements of 87-2, 87-5, and 87-6. These samples may be useful for blending, but are too long for acceptable bakery flours. Milling properties of samples 1, 3, 4, and 5 are shown with cumulative ash curves on page 2.

CALIFORNIA LARGE SCALE

+---+ 87 1949 Δ--Δ 87 1950 O---O 87 1951 +.....+ 87 1952



% OF TOTAL PRODUCTS

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

NTN RANCH SOFT WHEATS

NURSCO 80 WALLA WALLA, WA NELSON/PROCTOR

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC RMKS	
												1/	4/
871953	HILL 81			61.6	75.4	0.36	94.2	8.2	52.2	3L	9.32	9.35	
871954	TRES	C1017954	CLUB	60.6	74.6	0.34	94.2	6.5	49.8	1L	9.06	8.96	
871955	EXPERIMENTAL	C1017917	CLUB	58.0	70.8	0.36	88.4	8.6	51.2	2L	9.27	9.32	

- 1/ Observed Values Corrected to 14% Moisture Basis.
- 3/ Absorption at 14% Moisture Corrected to 8% Protein.
- 4/ Observed Values Corrected to 8% Protein.

- 5/ Particularly Promising Overall Quality Characteristics.
- 6/ Promising Overall Quality Characteristics.

COMMENTS: These wheats were above average in flour yield and milling score (Hill 81 and Tres). The experimental is probably therefore low in flour yield, but it had excellent soft wheat properties including cookie spread.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

ISOLINES

WALLA WALLA, WA

R.E. ALLAN

NURSCO 81

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
					1/	1/	1/	1/	3/			4/	
871956	81X290 EB/5*NGN	87-511	SWW	64.8	70.1	0.38	86.3	10.5	58.1	2M	8.95	9.00	
871957	81X208 EB/5*NGN	87-512	SWW	62.0	69.8	0.36	86.9	9.0	58.0	2M	8.99	8.88	
871958	NUGAINES	87-513	SWW	60.4	70.4	0.38	86.3	9.3	57.7	2M	9.17	9.09	
871959	81X217 EB/5*NGN	87-514	SWW	62.4	71.8	0.35	90.1	9.2	58.2	2M	9.15	9.06	
871960	81X313 EB/5*NGN	87-515	SWW	62.4	70.1	0.38	86.1	10.2	57.7	2M	9.01	9.03	
871961	81X266 EB/5*NGN	87-516	SWW	62.4	70.9	0.39	86.5	9.7	57.4	2M	9.17	9.14	
871962	81X290 EB/5*NGN	87-517	SWW	60.8	70.2	0.34	88.6	10.5	57.8	2M	9.19	9.24	
871963	81X229 EB/5*NGN	87-518	SWW	60.0	70.6	0.35	88.8	10.6	57.2	2M	9.20	9.27	
871964	81X226 EB/5*NGN	87-519	SWW	59.6	70.1	0.34	88.8	10.3	57.5	2M	9.07	9.11	
871965	81X266 EB/5*NGN	87-520	SWW	62.8	71.3	0.39	87.3	8.9	57.4	2M	9.42	9.30	
871966	81X212 EB/5*NGN	87-521	SWW	62.8	70.8	0.34	89.5	9.1	56.7	2M	9.22	9.13	
871967	81X226 EB/5*NGN	87-522	SWW	62.8	70.2	0.34	89.1	9.8	56.3	2M	9.11	9.09	
871968	81X221 EB/5*NGN	87-523	SWW	63.6	71.1	0.35	89.2	9.2	55.7	1M	9.25	9.16	
871969	81X290 EB/5*NGN	87-524	SWW	63.2	70.4	0.34	89.0	10.1	58.0	2M	9.11	9.12	
871970	81X209 EB/5*NGN	87-525	SWW	62.8	70.9	0.39	86.7	9.5	57.1	2M	9.24	9.18	
871971	EARLY BLACKHULL	87-526	SRW	62.4	72.5	0.36	90.6	12.1	58.0	1H	8.70	8.93	
871972	81X527 EB/5*NGN	87-527	SWW	62.8	70.4	0.36	87.7	8.9	57.4	2M	9.24	9.12	
871973	81X248 EB/5*NGN	87-528	SWW	62.8	69.7	0.38	85.9	10.2	57.9	2M	8.85	8.87	
871974	81X229 EB/5*NGN	87-529	SWW	61.6	72.0	0.38	88.8	9.1	57.2	2M	9.12	9.03	
871975	81X267 EB/5*NGN	87-530	SWW	60.0	72.2	0.38	88.9	9.2	58.1	2M	9.11	9.02	
871976	81X216 EB/5*NGN	87-216	SWW	62.8	69.7	0.36	87.0	8.9	56.7	1M	8.97	8.85	
871977	81X248 EB/5*NGN	87-532	SWW	61.6	70.3	0.37	87.0	9.5	57.1	2M	8.97	8.92	
871978	81X208 EB/5*NGN	87-533	SWW	61.6	70.8	0.36	88.1	9.0	55.8	1M	9.30	9.19	
871979	81X217 EB/5*NGN	87-534	SWW	61.6	69.6	0.37	86.1	8.8	56.5	1M	9.15	9.02	
871980	81X217 EB/5*NGN	87-535	SWW	62.8	70.5	0.36	88.0	8.9	56.7	2M	9.24	9.12	
871981	81X217 EB/5*NGN	87-536	SWW	62.4	71.4	0.37	88.7	9.1	55.9	2M	8.94	8.84	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: All these isolines were equal and most were better than Nugaines in milling properties (flour yield, ash and milling score).
Cookie baking showed similar results; most were better than Nugaines and Early Blackhull.

NURSCO 82 (Revised 9/12/88)

PULLMAN, WA

R.E. ALLAN

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS	BABSC
						1/		1/	3/			3/
871982	Timgalen	601	HWS	62.3	67.0	0.41	74.7	13.1	66.6	2H	69.4	67.3
871983	AUS 16035/Kite	6/603	HWS	64.8	71.8	0.40	82.2	11.6	66.5	4H	68.3	67.7
871984	Darken AUS 11614	604	HWS	61.9	69.6	0.48	75.8	10.7	63.4	7M	65.3	65.6
871985	Shortim AUS 20276	6/605	HWS	60.2	68.6	0.61	69.6	12.6	65.7	3H	68.0	66.4
871986	Banks QT 4081	606	HWS	63.5	70.7	0.43	81.1	11.7	65.2	2H	66.6	65.9
871987	Cook	607	HWS	64.2	71.8	0.40	84.9	11.5	67.3	4H	69.5	69.0
871988	Erget	608	SWS	60.7	70.4	0.42	80.5	10.3	61.9	3M	61.9	62.6
871989	Kite	609	HWS	62.7	69.6	0.43	80.4	11.9	65.7	2H	67.3	66.4
871990	Millewa	610	HWS	62.9	70.2	0.42	81.9	11.0	65.0	2H	65.7	65.7
871991	Sun 25U	611	HWS	61.7	69.1	0.47	76.8	11.0	64.9	2H	65.6	65.6
871992	Sun 27B	612	HWS	59.2	69.0	0.44	77.9	12.9	66.2	2H	68.8	66.9
871993	TR 380.16	6/613	HWS	59.8	70.9	0.50	77.1	12.7	66.8	2H	70.2	68.5
871994	Condor Sel. P44	614	HWS	62.4	72.7	0.48	81.2	11.3	63.6	2M	64.6	64.3
871995	UPID AUS 19814	615	HWS	60.7	71.8	0.45	82.1	12.0	63.3	4M	66.0	65.0
871996	Milling AUS 20595	616	HWS	61.9	72.0	0.44	82.4	10.3	62.3	3M	62.8	63.5
871997	PENEAWA	620	SWS	62.8	70.0	0.45	76.9	9.7	60.2	4M	59.6	60.9
871998	MCKAY	621	HRS	62.8	71.3	0.40	82.3	11.3	62.5	4H	64.5	64.2
871999	OWENS	622	SWS	62.6	69.9	0.38	81.7	9.8	59.6	2M	58.1	59.3

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 82

PULLMAN, WA

R.E. ALLAN

LABNUM	VARIETY	IDNO	CLASS	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	WTIN	NOSCO	RMKS
871982		601	HWS	2.4	1005	875	2			350		73 P-FYELD Q-MTIME
871983		603	HWS	3.1	1010	973	2			330		74
871984		604	HWS	3.7	790	809	6	7.67	7.65	335		74 P-LVOL&BCRGR
871985		605	HWS	3.0	1000	901	2			340		71 Q-FYELD
871986		606	HWS	2.2	950	907	3			326		68 P-MTIME Q-LVOL
871987		607	HWS	3.0	925	894	2			309		70
871988		608	SWS	2.5	855	897	5	8.12	8.05	328		72 Q-MTIME&BCRGR P-CODI
871989		609	HWS	2.3	945	889	4			331		72 Q-MTIME&BCRGR
871990		610	HWS	2.1	860	860	6			334		74 P-BCRGR&MTIME
871991		611	HWS	2.1	855	855	8			326		71 P-BCRGR
871992		612	HWS	2.1	935	817	3			343		70 P-MTIME&LVOL
871993		613	HWS	2.4	960	855	2			341		74 Q-MTIME
871994		614	HWS	1.3	845	826	7	7.99	8.01	341		74 P-MTIME,BCRGR&CODI
871995		615	HWS	3.2	925	863	6			346		72 P-BCRGR
871996		616	HWS	2.8	855	898	5	8.01	7.96	324		80 P-BCRGR&CODI
871997	PENEWAWA	620	SWS	4.1	855	933	5	8.80	8.66	334		80
871998	MCKAY	621	HRS	4.0	970	951	2			315		68
871999	OWENS	622	SWS	2.1	885	957	8	8.99	8.86	343		79

COMMENTS: With the exception of #603, none of these wheats are equal to McKay in bread baking properties. The better ones are footnoted and may be worthy of further testing. Several have weak dough mixing properties associated with short mix time (see remarks). In regard to the noodle tests, only AUS 16035/Kite, Darken AUS 11614, Millewa, TR380.16, Condor Sel. P44, and Miling AUS 20595 (very good) were acceptable. Miling (AUS 20595) was the only sample equal to Penewawa and Owens, which were quite good in noodle making. It appears there may be a cultivar x environment interaction with most of the Australian varieties which are generally regarded as good noodle wheats when grown in Australia.

NURSCO 083

IN, MI, OH, WA

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI
										Cookie TGS*	
370001	TYLER--PULLMAN--		SRW	61.4	71.6	0.34	85.6	10.4	57.1	3M	3 8.64
370002	AUBURN		SRW	62.4	70.6	0.32	84.7	10.5	59.1	6M	3 8.73
370003	FRANKENMUTH		SWW	63.0	71.2	0.35	83.8	10.3	55.4	2M	6 8.94
370004	2550		SRW	62.8	71.4	0.36	84.6	9.4	56.2	2M	6 8.92
370005	ARTHUR		SRW	61.5	70.9	0.37	81.3	11.7	57.0	3M	5 8.87
370006	HILLSDALE		SRW	62.3	70.5	0.31	83.2	10.6	54.8	1M	6 8.94
370007	CALDWELL		SRW	61.9	73.3	0.29	91.4	9.3	57.1	4L	8 9.11
370008	CARDINAL		SRW	63.1	73.1	0.32	87.3	10.0	58.1	2M	6 8.89
370009	AUGUSTA		SWW	61.9	72.2	0.34	85.6	9.5	57.6	2M	4 8.88
370010	HILL 81		SWW	64.1	74.5	0.34	88.8	10.6	56.1	2M	4 8.79
370011	CREW		CLUB	62.2	74.2	0.34	89.2	9.9	54.0	2M	6 8.89
370012	STEPHENS		SWW	62.3	72.3	0.34	85.4	9.8	55.0	2M	7 8.93
370013	DAWS		SWW	64.1	71.4	0.32	86.0	9.6	56.6	3M	4 8.52
370014	NUGAINES		SWW	64.5	70.4	0.29	84.6	9.2	57.7	3M	4 8.77
370015	LEWJAIN		SWW	64.0	73.9	0.35	88.4	10.0	57.7	4M	3 9.02
370016	TRES		CLUB	63.6	74.7	0.33	90.5	9.9	52.3	1M	- 9.12
370017	TYLER--WALLA WALLA--		SRW	60.4	72.4	0.35	85.1	9.7	56.0	2M	4 8.81
370018	AUBURN		SRW	62.7	71.6	0.33	85.7	10.2	57.0	3M	4 8.83
370019	FRANKENMUTH		SWW	61.8	71.7	0.36	83.4	10.2	54.9	2M	6 9.12
370020	2550		SRW	62.8	71.0	0.35	83.2	9.2	55.5	1M	6 8.91
370021	ARTHUR		SRW	62.4	70.9	0.41	78.5	11.6	57.4	3M	6 8.84
370022	HILLSDALE		SRW	61.0	70.0	0.34	81.5	10.3	53.3	1M	7 9.19
370023	CALDWELL		SRW	63.8	74.3	0.35	88.7	9.2	57.0	2M	7 9.23
370024	CARDINAL		SRW	61.2	73.5	0.36	85.0	9.6	54.3	2M	5 9.15
370025	AUGUSTA		SWW	59.8	73.2	0.39	83.9	9.4	52.9	2M	4 9.05
370026	HILL 81		SWW	61.0	73.9	0.40	86.2	10.5	53.9	2M	5 8.79
370027	CREW		CLUB	61.1	74.0	0.41	83.9	9.7	52.2	1M	6 8.87
370028	STEPHENS		SWW	59.4	72.7	0.41	81.7	10.4	52.4	2M	5 8.86
370029	DAWS		SWW	61.2	69.9	0.41	78.8	9.8	54.2	3M	5 8.64
370030	NUGAINES		SWW	61.7	71.1	0.39	79.8	9.5	54.9	3M	4 8.74
370031	LEWJAIN		SWW	60.0	72.0	0.37	82.8	9.7	55.2	4M	4 8.96
370033	TYLER--MICHIGAN--		SRW	57.7	70.7	0.34	83.7	8.9	55.9	4L	4 9.16
370034	AUBURN		SRW	59.7	69.5	0.34	81.4	9.8	57.0	6L	4 9.14
370035	FRANKENMUTH		SWW	57.4	69.5	0.38	80.7	8.0	54.9	5L	6 9.21
370036	2550		SRW	57.3	68.1	0.35	80.2	8.8	56.1	4L	5 8.97

NURSCO 083

IN, MI, OH, WA

LABNUM	VARIETY	HARDNESS		CLASS	CODIC	CAVOL	SCSOR	WTIN	NOSCO	VISC	VISCC	Alpha-Amyl.	
		Wheat	Flour									FN	DSI
370001	TYLER--PULLMAN--	40.7	32.1	SRW	8.68	1290	74.0	332	71	177	164	584	.082
370002	AUBURN	33.4	26.4	SRW	8.79	1280	74.0	312	69	211	192	473	.068
370003	FRANKENMUTH	41.3	31.7	SWW	8.97	1235	70.0	326	71	130	123	427	.067
370004	2550	27.8	30.7	SRW	8.85	1240	73.0	322	72	131	149	484	.061
370005	ARTHUR	39.8	31.8	SRW	9.06	1245	71.0	332	70	193	145	481	.065
370006	HILLSDALE	32.4	34.8	SRW	9.01	1205	68.0	350	74	132	118	406	.063
370007	CALDWELL	24.2	25.0	SRW	9.03	1235	75.0	336	73	160	186	501	.067
370008	CARDINAL	33.1	31.1	SRW	8.89	1205	69.0	352	73	135	135	370	.066
370009	AUGUSTA	31.9	33.9	SWW	8.83	1175	66.0	342	75	99	110	410	.067
370010	HILL 81	42.9	33.9	SWW	8.86	1175	64.0	347	72	150	135	385	.074
370011	CREW	33.1	31.8	CLUB	8.88	1305	76.0	357	77	106	108	430	.082
370012	STEPHENS	37.9	26.5	SWW	8.91	1230	68.0	327	72	101	105	461	.066
370013	DAWS	27.3	33.7	SWW	8.47	1295	76.0	338	74	163	177	417	.064
370014	NUGAINES	32.3	33.1	SWW	8.67	1245	69.0	335	72	160	190	711	.058
370015	LEWJAIN	27.6	27.8	SWW	9.02	1300	72.0	338	70	133	133	569	.057
370016	TRES	32.1	31.9	CLUB	9.11	1305	75.0	345	77	73	75	387	.077
370017	TYLER--WALLA WALLA--	25.7	30.2	SRW	8.77	1290	77.0	339	73	103	109	373	.060
370018	AUBURN	28.1	29.0	SRW	8.85	1305	73.0	339	73	142	137	453	.058
370019	FRANKENMUTH	28.3	33.0	SWW	9.14	1255	71.0	341	74	83	80	419	.064
370020	2550	19.6	30.4	SRW	8.82	1245	71.0	333	72	64	76	374	.067
370021	ARTHUR	36.8	30.8	SRW	9.01	1210	70.0	351	79	84	65	428	.073
370022	HILLSDALE	24.6	30.1	SRW	9.23	1255	69.0	333	75	71	67	491	.060
370023	CALDWELL	24.5	37.8	SRW	9.14	1250	71.0	337	73	98	116	398	.072
370024	CARDINAL	34.4	32.3	SRW	9.11	1220	74.0	342	74	69	75	372	.062
370025	AUGUSTA	22.9	37.7	SWW	8.98	1210	71.0	326	72	68	76	381	.061
370026	HILL 81	37.1	35.2	SWW	8.84	1265	71.0	346	76	106	96	519	.063
370027	CREW	28.6	36.8	CLUB	8.85	1315	77.0	342	73	68	72	440	.068
370028	STEPHENS	25.4	33.1	SWW	8.90	1240	72.0	339	70	71	66	445	.067
370029	DAWS	22.9	31.0	SWW	8.62	1275	73.0	345	74	131	137	428	.061
370030	NUGAINES	22.1	26.2	SWW	8.68	1280	74.0	328	74	123	137	428	.067
370031	LEWJAIN	23.0	27.2	SWW	8.93	1345	79.0	345	73	124	132	455	.061
370033	TYLER--MICHIGAN--	28.3	30.8	SRW	9.04	1380	72.0	346	75	118	150	560	.073
370034	AUBURN	19.4	25.2	SRW	9.12	1395	83.0	354	74	153	159	547	.065
370035	FRANKENMUTH	17.0	29.0	SWW	8.99	1390	80.0	361	77	69	113	339	.980
370036	2550	14.3	19.6	SRW	8.84	1325	80.0	348	73	106	138	485	.093

IN, MI, OH, WA

NURSCO 083

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE Cookie TGS*	CODI
370037	ARTHUR		SRW	59.4	69.9	0.40	79.6	9.2	55.0	4L	6 8.96
370038	HILLSDALE		SRW	58.3	71.2	0.38	81.8	9.1	55.9	2L	7 9.20
370039	CALDWELL		SRW	57.8	72.2	0.36	85.3	8.4	54.7	7L	8 9.31
370040	CARDINAL		SRW	58.0	71.2	0.33	85.3	8.2	57.4	6L	7 9.38
370041	AUGUSTA		SWW	54.7	71.4	0.39	81.6	7.9	56.6	4L	5 9.38
370042	HILL 81		SWW	59.7	74.9	0.44	83.3	9.3	54.8	3L	5 9.20
370043	CREW		CLUB	59.8	73.4	0.34	87.5	9.6	53.1	2L	5 9.14
370044	STEPHENS		SWW	61.6	75.1	0.33	88.2	9.6	53.4	2L	- 9.12
370045	DAWS		SWW	56.6	68.2	0.32	82.3	9.7	54.5	4L	3 8.77
370046	NUGAINES		SWW	61.2	70.5	0.32	82.7	9.2	56.3	5M	3 8.76
370047	LEWJAIN		SWW	57.2	70.4	0.43	79.5	10.3	55.9	4M	4 8.93

NURSCO 083

IN, MI, OH, WA

LABNUM	VARIETY	HARDNESS		CLASS	CODIC	CAVOL	SCSOR	WTIN	NOSCO	VISC	VISCC	Alpha-Amyl.	
		Wheat	Flour									FN	DSI
370037	ARTHUR	27.8	27.3	SRW	8.87	1360	82.0	358	74	102	120	469	.102
370038	HILLSDALE	22.5	29.1	SRW	9.10	1315	79.0	350	72	56	68	467	.091
370039	CALDWELL	21.9	24.6	SRW	9.13	1355	82.0	355	73	86	125	542	.080
370040	CARDINAL	20.0	28.7	SRW	9.18	1365	83.0	351	73	84	130	420	.101
370041	AUGUSTA	16.5	23.9	SWW	9.15	1355	82.0	351	76	60	101	210	2.01
370042	HILL 81	30.3	32.0	SWW	9.12	1320	75.0			83	95	384	.378
370043	CREW	21.2	34.1	CLUB	9.11	1360	82.0			80	87	375	.376
370044	STEPHENS	21.3	24.5	SWW	9.08					74	80	459	.145
370045	DAWS	19.1	29.2	SWW	8.74	1345	80.0	352	75	112	119	346	.796
370046	NUGAINES	16.5	25.0	SWW	8.67	1390	82.0			112	133	563	.109
370047	LEWJAIN	14.4	19.7	SWW	8.96	1400	81.0	346	71	122	115	429	.110

COMMENTS: This is a cooperative project with the USDA, ARS, Soft Wheat Quality Laboratory, Wooster, OH in an effort to compare and document similarities and/or differences between Eastern Soft Red Winter Wheat and PNW Soft White Wheats. Nine SRW and seven SWW varieties which represent the major part of the current commercial production in both areas were grown both in the WA and MI with the cooperation of R.E. Allan and E. Everson, respectively. The wheat samples were split and evaluated at both laboratories with tests routinely used to evaluate soft wheat cultivars. This group reports the findings of the sub-sample milled at the WWQL. See Nursco 124 for the physical/chemical and baking results of the sub-sample milled at the SWQL. The project will be repeated with the 1988 crop and the data combined and statistically treated.

* Cookie TGS = Top Grain Score (Scale of 1-10 with 10 the highest).

NURSCO 84

LABNUM	VARIETY	IDNO	CLASS	WPROT	FYELD	FASH	MSCOR	FPROT	AGTRO	MABSC	MTYPE	VISC	CODI	CODIC
370078	NUGAINES--PULLMAN WINTER--													
370079	DAWS	C1013968	SWW	10.4	69.2	0.37	78.7	8.8		58.1	4M	109	9.16	8.81
370080	STEPHENS	C1017419	SWW	10.7	70.6	0.35	81.2	9.2		56.8	3L	122	8.82	8.52
370081	HATTON	C1017596	SWW	10.9	71.5	0.36	82.3	9.5		56.7	2M	91	8.77	8.50
370082	LEWJAIN	C1017772	HRW	12.2	72.0	0.34	84.8	10.9		64.0	6M		8.26	8.17
		C1017909	SWW	11.0	72.6	0.32	88.1	9.4		59.9	4M	144	9.06	8.78
370083	TRES	C1017917	CLUB	11.5	73.2	0.38	86.6	10.0		53.4	1M	67	9.11	8.97
370084	CREW	C1017951	CLUB	10.5	74.3	0.39	86.1	9.1		54.3	2M	66	9.19	8.98
370085	HILL 81	C1017954	SWW	11.8	75.0	0.39	86.7	10.6		57.6	2M	123	9.06	8.91
370086	DUSTY	P1486429	SWW	10.5	72.8	0.34	86.4	9.4		57.9	2M	106	9.00	8.71
370087	JOHN	P1494095	SWW	10.5	72.1	0.33	86.5	9.5		57.8	2M	110	9.04	8.76
370088	BATUM	P1495013	HRW	11.2	73.1	0.33	89.8	10.3		64.0	2M		8.09	7.95
370089	OVESON	OR7996	SWW	11.3	70.2	0.38	79.0	9.8		57.3	6M	115	8.82	8.58
370090	MALCOLM	ORCW8113	SWW	11.0	72.1	0.37	82.8	9.4		58.2	3M	84	8.82	8.54
370091	ANDREW	WA6820	HRW	12.4	71.7	0.33	87.9	11.7		64.4	6M		8.09	8.06
370092	CASHUP		SWW	11.0	72.2	0.36	83.9	10.1		58.8	3M	98	9.05	8.84
370093		OR845	SWW	11.5	70.7	0.34	83.9	9.8		60.6	3M	137	8.52	8.28
370094		ORCW8314	SWW	12.8	67.7	0.41	74.7	10.9		59.8	2M	130	8.42	8.30
370095		ORCW8626	SWW	12.3	74.3	0.37	87.1	10.8		58.3	2M	169	8.76	8.63
370096		WA7163	SWW	11.5	72.8	0.35	87.0	10.3		59.4	3M	157	8.67	8.49
370097		WA7166	CLUB	10.7	73.2	0.34	87.9	9.1		59.9	6L	145	8.84	8.63
370098	MORO--LIND WINTER--													
370099	WANSER	WA7433	HRW	11.5	70.1	0.38	80.6	11.3		61.7	2M		7.81	7.76
370100	NUGAINES	C1013740	CLUB	15.1	71.6	0.43	79.7	14.1		58.5	1H	267	8.40	8.55
370101	LUKE	C1013844	HRW	14.7	69.3	0.39	79.9	14.1		61.7	2H		7.89	8.06
370102		C1013968	SWW	14.5	67.5	0.41	75.8	13.1		59.6	1H	276	8.16	8.29
		C1014586	SWW	14.1	71.0	0.43	79.0	13.2		59.4	1H	196	8.86	8.96
370103	SPRAGUE	C1015376	SWW	14.5	68.2	0.42	75.3	13.2		58.8	1H	203	8.50	8.57
370104	DAWS	C1017419	SWW	14.4	69.5	0.46	73.6	13.4		56.3	1H	178	8.56	8.72
370105	STEPHENS	C1017596	SWW	15.7	71.9	0.46	79.5	14.4		58.0	1H	177	8.41	8.68
370106	WESTON	C1017727	HRW	14.0	71.8	0.37	84.8	12.6		65.4	2H		7.85	7.90
370107	HATTON	C1017772	HRW	15.1	71.0	0.40	82.4	14.1		66.4	2H		7.86	8.03
370108	TYEE	C1017773	CLUB	15.7	70.6	0.42	79.7	14.1		57.1	1H	227	8.54	8.69
370109	LEWJAIN	C1017909	SWW	14.5	70.6	0.42	78.6	13.2		59.3	1H	211	8.87	9.01
370110	TRES	C1017917	CLUB	15.8	72.2	0.44	80.2	14.4		50.7	1H	110	8.66	8.83
370111	CREW	C1017951	CLUB	15.6	72.3	0.44	79.0	14.1		53.4	1H	151	8.55	8.70
370112	HILL 81	C1017954	SWW	15.8	73.3	0.48	78.2	15.2		56.3	1H	210	8.45	8.80

LABNUM	VARIETY	IDNO	CLASS	CAVOL	SCSOR	WTIN	NOSCO	BABS	MTIME	LVOL	LVOLC	BCRGR	RMKS
370078	NUGAINES--PULLMAN WINTER--	C1013968	SWW	1270	72.0	323	74	56.6	2.5	780	972	8	
370079	DAWS	C1017419	SWW	1300	75.0	346	75	55.7	1.9	740	908	8	
370080	STEPHENS	C1017596	SWW	1235	71.0	355	75	54.9	2.1	675	825	8	
370081	HATTON	C1017772	HRW	1130	61.0	335	71	65.1	3.2	810	878	6	
370082	LEWJAIN	C1017909	SWW	1280	74.0	334	73	58.0	2.9	780	936	6	
370083	TRES	C1017917	CLUB	1320	80.0	367	78	52.1	1.1	540	650	9	
370084	CREW	C1017951	CLUB	1310	78.0	360	75	51.1	1.3	640	800	9	
370085	HILL 81	C1017954	SWW	1220	67.0	352	74	54.9	1.3	755	839	8	
370086	DUSTY	P1486429	SWW	1245	72.0	348	77	55.0	1.6	740	896	7	
370087	JOHN	P1494095	SWW	1225	69.0	355	78	55.0	2.1	725	875	5	
370088	BATUM	P1495013	HRW	1130	62.0	330	73	62.0	1.8	805	910	7	
370089	OVESON	OR7996	SWW	1150	64.0	311	72	56.8	3.7	800	932	5	
370090	MALCOLM	ORCW8113	SWW	1240	73.0	345	74	56.3	2.0	685	841	7	
370091	ANDREW	WA6820	HRW	1105	61.0	336	70	65.8	3.3	825	844	6	
370092	CASHUP		SWW	1190	69.0	334	74	56.6	2.2	740	854	8	
370093		OR845	SWW	1210	69.0	325	71	59.1	2.3	710	842	8	
370094		ORCW8314	SWW	1205	66.0	326	69	59.4	1.7	760	826	8	
370095		ORCW8626	SWW	1215	69.0	337	70	57.8	2.0	845	917	6	
370096		WA7163	SWW	1180	68.0	333	73	58.4	2.0	775	877	7	
370097		WA7166	CLUB	1205	71.0	341	76	58.7	3.2	695	855	8	
370098		WA7433	HRW	1105	61.0	330	71	60.7	1.3	625	668	9	
370099	MORO--LIND WINTER--	C1013740	CLUB	1085	57.0	376	73	60.3	1.2	850	735	8	
370100	WANSER	C1013844	HRW	1085	58.0	345	70	64.5	2.1	905	760	4	
370101	NUGAINES	C1013968	SWW	1075	52.0	348	70	60.4	1.2	820	752	8	
370102	LUKE	C1014586	SWW	1115	56.0	357	69	60.3	1.4	900	828	5	
370103	SPRAGUE	C1015376	SWW	1120	59.0	359	73	59.7	1.0	675	603	9	
370104	DAWS	C1017419	SWW	1080	54.0	361	70	57.4	1.2	839	755	8	
370105	STEPHENS	C1017596	SWW	1030	54.0	376	70	60.1	1.0	720	576	9	
370106	WESTON	C1017727	HRW	1055	58.0	334	71	66.7	2.0	950	913	4	
370107	HATTON	C1017772	HRW	1025	52.0	324	65	69.2	2.5	945	815	3	
370108	TYEE	C1017773	CLUB	1120	58.0	352	68	59.9	1.4	860	745	9	
370109	LEWJAIN	C1017909	SWW	1155	64.0	354	70	60.7	1.7	850	778	6	
370110	TRES	C1017917	CLUB	1100	56.0	380	70	52.3	1.0	500	368	9	
370111	CREW	C1017951	CLUB	1160	59.0	367	69	54.7	1.0	635	520	9	
370112	HILL 81	C1017954	SWW	1000	48.0	349	68	58.7	1.0	715	523	9	

NURSCO 84

PULLMAN, LIND, WA

LABNUM	VARIETY	IDNO	CLASS	WPROT	FYELD	FASH	MSCOR	FPROT	AGTRO	MABSC	MTYPE	VISC	CODI	CODIC
370113	DUSTY	PI486429	SWM	14.1	72.8	0.42	81.6	13.1		59.9	1H	202	9.04	9.16
370114	JOHN	PI494095	SWM	14.5	71.1	0.42	79.2	13.7		59.2	1H	215	8.42	8.61
370115	BATUM	PI495013	HRW	14.1	71.1	0.39	82.8	13.1		63.9	2H		7.80	7.89
370116	ANDREW	WA6820	HRW	16.3	67.0	0.43	74.1	15.0		64.1	2H		7.80	8.04
370117		WA7217	SWM	15.2	71.5	0.43	80.7	14.0		56.6	1H	201	8.77	8.99
370118	WAMPUM--PULLMAN SPRING--													
370119	DIRKWIN	CI017691	HRS	12.6	70.8	0.40	83.5	11.7		66.4	4H		8.15	8.13
370120	MCKAY	CI017745	SWS	12.4	71.6	0.44	79.9	11.4		60.5	1M	106	8.74	8.67
370121	OWENS	CI017903	HRS	12.4	72.1	0.39	84.6	11.4		65.0	4H		8.39	8.34
370122	TREASURE	CI017904	SWS	11.3	70.7	0.40	80.3	10.1		60.2	2M	120	9.24	9.03
370123	EDWALL	PI468962	SWS	12.4	71.3	0.43	79.9	11.1		58.6	2M	98	9.07	8.98
370124	COPPER	PI477919	SWS	12.1	71.7	0.39	83.8	10.5		58.4	2M	166	9.10	8.93
370125	SPILLMAN	PI502644	HRS	13.2	70.3	0.38	83.6	11.8		65.1	5H		8.04	8.02
370126	PENEWAWA	PI506350	HRS	12.7	70.6	0.42	80.8	11.7		65.3	3H		7.99	7.96
370127		WA6920	SWS	12.0	68.8	0.46	75.4	10.9		58.6	4M	159	8.66	8.54
		WA7183	SWS	11.5	71.0	0.45	80.7	10.5		57.2	3M	111	8.99	8.82
370128	WADUAL	WA7187	SWS	12.8	71.9	0.38	84.2	11.4		59.3	4M	219	8.56	8.50
370129		WA7492	SWS	11.9	67.6	0.41	73.2	11.0		61.6	3M	148	8.85	8.74
370130	WARED--LIND SPRING--	CI015926	HRS	14.9	71.9	0.46	80.7	13.6		64.8	3H		8.27	8.40
370131	BORAH	CI017267	HRS	15.2	70.9	0.42	80.2	14.3		65.4	3H		7.94	8.12
370132	URQUIE	CI017413	SWS	13.6	71.2	0.45	78.5	12.4		60.9	2H	210	8.69	8.73
370133	WAMPUM	CI017691	HRS	14.9	70.8	0.47	79.8	13.5		66.1	4H		8.21	8.33
370134	MCKAY	CI017903	HRS	14.8	71.2	0.43	82.9	14.0		67.7	6H		8.07	8.23
370135	WAVERLY	CI017911	SWS	14.2	71.1	0.45	78.7	13.1		60.7	2H	251	8.41	8.53
370136	TREASURE	PI468962	SWS	13.9	71.5	0.45	79.0	12.1		59.5	2H	176	8.80	8.81
370137	EDWALL	PI477919	SWS	13.2	69.4	0.48	74.1	12.1		60.4	1H	154	8.66	8.67
370138	COPPER	PI502644	HRS	15.3	71.4	0.48	79.8	14.0		65.2	3H		7.92	8.08
370139	SPILLMAN	PI506350	HRS	15.1	70.7	0.48	79.8	14.2		66.1	3H		7.75	7.93
370140	PENEWAWA	WA6920	SWS	13.8	69.2	0.50	71.9	12.3		60.2	4M	192	8.65	8.68
370141		WA7176	SWS	14.5	68.5	0.54	69.7	13.3		59.8	1H	160	8.59	8.73
370142		WA7183	SWS	13.7	70.7	0.51	74.5	12.8		60.1	3M	148	9.04	9.13
370143	WADUAL	WA7187	SWS	15.1	70.4	0.43	76.8	13.9		62.6	4H	318	8.69	8.90
370144		WA7326	HRS	15.7	71.5	0.47	80.2	15.0		68.9	8H		7.91	8.15
370145		WA7328	HRS	15.0	71.9	0.45	81.9	14.0		64.5	3H		8.14	8.30
370146		WA7496	SWS	14.3	69.6	0.50	73.8	13.3		58.8	3M	177	8.77	8.92

DRILL STRIPS

PULLMAN, LIND, WA

NURSCO 84

LABNUM	VARIETY	IDNO	CLASS	CAVOL	SCSOR	WTIN	NOSCO	BABS	MTIME	LVOL	LVOLC	BCRGR	RMKS
370113	DUSTY	PI486429	SWW	1140	60.0	344	69	60.2	1.3	960	894	6	
370114	JOHN	PI494095	SWW	1110	59.0	363	70	59.6	1.2	840	738	6	
370115	BATUM	PI495013	HRW	1060	55.0	348	70	65.2	1.5	930	862	5	
370116	ANDREW	WA6820	HRW			330	67	67.3	1.6	960	774	4	
370117		WA7217	SWW	1110	58.0	357	67	57.3	1.0	735	615	9	
370118	WAMPUM--PULLMAN SPRING--	CI017691	HRS	1050	56.0	332	69	66.8	4.3	935	954	5	
370119	DIRKWIN	CI017745	SWS	1175	62.0	345	72	58.6	1.3	765	801	8	
370120	MCKAY	CI017903	HRS	1125	63.0	348	71	66.1	4.7	920	957	4	
370121	OWENS	CI017904	SWS	1255	71.0	348	77	57.0	1.8	785	899	8	
370122	TREASURE	PI468962	SWS	1185	65.0	350	75	57.4	2.0	690	744	8	
370123	EDWALL	PI477919	SWS	1195	65.0	347	76	55.6	1.8	860	950	4	
370124	COPPER	PI502644	HRS	1110	62.0	325	70	61.6	4.3	920	932	4	
370125	SPILLMAN	PI506350	HRS	1005	53.0	329	69	66.7	3.5	925	944	3	
370126	PENEAWA	WA6920	SWS	1240	76.0	344	78	59.2	3.7	885	951	5	
370127		WA7183	SWS	1215	70.0	333	78	55.9	2.9	825	915	6	
370128	WADUAL	WA7187	SWS	1195	67.0	327	73	60.4	3.9	925	961	3	
370129		WA7492	SWS	1215	71.0	335	78	61.3	2.5	865	925	5	
370130	WARED--LIND SPRING--	CI015926	HRS	1165	59.0	340	69	67.1	3.6	1085	986	2	
370131	BORAH	CI017267	HRS	1105	59.0	343	68	68.4	3.4	1075	932	2	
370132	URQUIE	CI017413	SWS	1215	70.0	360	73	60.0	1.7	890	866	8	
370133	WAMPUM	CI017691	HRS			349	67	68.3	5.5	1060	967	2	
370134	MCKAY	CI017903	HRS			341	69	70.4	7.1	1010	886	2	
370135	WAVERLY	CI017911	SWS			369	75	61.5	1.9	970	904	5	
370136	TREASURE	PI468962	SWS			355	72	58.3	2.1	895	889	8	
370137	EDWALL	PI477919	SWS			364	72	59.2	1.7	910	904	8	
370138	COPPER	PI502644	HRS			343	68	66.9	3.5	990	866	3	
370139	SPILLMAN	PI506350	HRS			357	68	68.0	3.4	1030	894	3	
370140	PENEAWA	WA6920	SWS			373	77	60.2	3.3	985	967	6	
370141		WA7176	SWS			349	71	59.8	1.9	920	842	7	
370142		WA7183	SWS			350	72	59.6	2.1	955	907	7	
370143	WADUAL	WA7187	SWS			352	71	64.2	4.0	1090	976	3	
370144		WA7326	HRS			332	67	70.6	13.0	1065	879	2	
370145		WA7328	HRS			352	68	66.2	3.6	1000	876	4	
370146		WA7496	SWS			347	70	59.8	2.3	960	882	3	

COMMENTS: These standard varieties were grown in large quantities by the Dept. of Agronomy and Soils, Washington State University, for the purpose of providing a resource of materials for special research projects at the Western Wheat Quality Laboratory. We express our appreciation for their cooperation. The samples grown at Lind were very high in protein, but they provide a clear illustration of the effects of protein on the baked products.

NURSCO 85

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
					1/	1/		1/	3/			4/	
370147	SPM/JCM	6/86-1072	CLUB	60.2	73.3	0.46	85.1	9.6	51.9	1M	9.54	9.58	Q-FASH
370148	SPM/JCM	6/86-1077	CLUB	60.8	73.2	0.43	86.8	8.9	51.6	2M	9.35	9.34	Q-FASH
370149	DAWS/FARO	6/86-1091	CLUB	60.4	73.7	0.42	88.5	8.4	51.9	2L	9.39	9.34	
370150	UNKNOWN	5/86-1097	CLUB	61.6	75.0	0.37	93.2	8.5	51.5	2L	9.31	9.28	
370151	7C/MORO//RBS,F1/3/1,SPN/MORO 16723	5/86-1108	CLUB	62.3	74.8	0.37	93.0	9.9	51.7	2M	9.46	9.53	
370152	JCM/4/RBS/ANZA/3/KVZ/HYS//YMH...	6/86-1129	CLUB	61.5	71.7	0.36	89.3	9.7	51.4	2M	9.59	9.64	
370153	OR816	6/86-1156	CLUB	61.7	74.3	0.41	89.8	8.8	51.7	2L	9.39	9.37	
370154	HILL 81	OR68007	SWW	62.0	74.6	0.40	90.4	9.0	52.4	2M	9.30	9.30	
370155	UNKNOWN	5/86-1165	CLUB	62.0	73.8	0.39	90.2	8.1	49.5	1L	9.52	9.46	
370156	UNKNOWN	5/86-1175	CLUB	60.3	73.7	0.40	89.5	9.4	50.6	2M	9.44	9.47	
370157	PAHA//SEL. 72-330/DAWS(M76-429)PW77-41	6/86-1178	CLUB	63.2	72.7	0.37	90.2	8.3	51.8	2L	9.36	9.31	
370158	EG/178383//JCM,F1/3/F1,67-109/NUG...	6/86-1179	CLUB	62.3	72.2	0.37	89.4	8.6	50.5	1L	9.34	9.31	
370159	EG/178383//JCM,F1/3/F1,67-109/NUG...	6/86-1180	CLUB	62.4	71.9	0.37	89.1	8.3	51.2	1L	9.27	9.23	Soft Red
370160	RBS/YMH,F1/3/EG/178383//2*YMH	6/86-1208	SRW	61.6	72.3	0.37	89.6	9.3	51.5	3M	9.17	9.21	
370161	PAHA//SEL. 72-330/DAWS(76-429)DW77-41	5/86-1216	CLUB	63.7	74.0	0.37	91.7	8.9	52.1	3L	9.61	9.61	
370162	TRES	WA6698	CLUB	62.4	73.1	0.39	89.1	8.3	50.6	1L	9.26	9.21	Q-FYELD&CODI
370163	EG/178383,M65-2124//YMH*2/3/1523...	86-1222	CLUB	62.7	69.3	0.42	82.3	8.1	53.9	3L	8.96	8.90	Q-
370164	EG/178383,M65-2124//YMH*2/3/1523...	86-1224	CLUB	62.3	70.3	0.48	79.8	8.6	52.2	3L	9.24	9.21	
370165	5 PAHA//SEL.M72-30/DAWS(M76-429)DW77-41	5/86-1299	CLUB	63.5	74.0	0.38	91.1	8.4	52.6	3L	9.39	9.34	
370166	UNKNOWN	6/86-1310	CLUB	60.9	73.7	0.44	87.0	9.1	51.4	2M	9.05	9.06	
370167	PAHA//SEL.65-2124(M76-432)	6/86-1324	CLUB	61.8	73.6	0.43	87.6	9.4	51.6	2M	9.17	9.20	Q-FYELD
370168	UNKNOWN	86-1463	CLUB	60.8	70.4	0.41	84.5	9.3	51.6	2M	9.10	9.12	

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 9% Protein.

COMMENTS: This group of preliminary selections of club wheats are extraordinary in overall quality. Most are equal to or better than Tres and Hill 81 in milling and/or baking quality.

NURSCO 86

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/ 1/		1/ 1/	3/ 3/	
* 370170	STEPHENS	C1017956	SWW	60.3	74.0	0.39	86.1	10.1	53.6	1M
370171	HILL 81	C1017954	SWW	62.3	74.8	0.39	87.3	10.2	54.8	2M
370172	MALCOLM	ORCR8313	SWW	61.1	74.5	0.37	88.3	8.9	54.8	1M
370173	DUSTY	PI486429	SWW	62.1	73.9	0.37	88.0	9.2	54.8	3M
370174	OVESON	OR7996	SWW	60.3	72.4	0.42	78.8	10.5	56.7	4M
370175	TRES	C1017917	CLUB	62.3	73.1	0.40	83.4	10.2	51.0	1M
370176	OSU-21	6/88SWELT13	SWW	58.5	68.6	0.40	76.9	8.0	55.4	2L
370177	OSU-28	5/88SWELT14	SWW	58.5	68.4	0.39	77.5	7.9	56.2	3L
370178	ORCW8314	88SWELT15	SWW	57.9	71.7	0.39	81.4	10.6	53.7	2M
370179	ORCW8519	88SWELT16	SWW	59.3	72.0	0.39	82.5	11.0	56.1	3M
370180	ORCW8521	88SWELT17	SWW	59.2	70.9	0.43	78.8	11.1	57.4	1H
370181	ORCW8625	88SWELT18	SWW	59.7	72.1	0.42	80.2	11.4	55.5	1H
370182	ORCW8626	6/88SWELT19	SWW	62.4	75.8	0.41	88.0	10.6	56.1	2M
370183	ORCW8627	88SWELT20	SWW	63.0	71.8	0.34	84.5	10.4	57.2	2M
370184	ORCW8629	88SWELT21	SWW	59.9	71.9	0.35	82.8	10.0	56.4	2M
370185	ORCW8631	6/88SWELT22	SWW	61.6	71.6	0.34	82.3	10.1	57.8	3M
370186	ORCW8632	6/88SWELT23	SWW	58.3	69.7	0.38	78.7	8.0	55.2	3L
370187	ORCW8633	88SWELT24	SWW	62.6	72.3	0.39	81.6	10.2	54.9	2M
370188	ORCW8635	5/88SWELT25	SWW	62.1	72.7	0.35	84.7	8.5	55.2	3L
370189	ORCW8637	88SWELT26	SWW	61.6	72.0	0.38	80.8	9.4	56.0	2M
370190	ORCW8724	6/88SWELT27	SWW	60.9	70.9	0.40	78.1	8.7	56.5	3M
370191	ORCW8725	88SWELT28	SWW	61.3	72.0	0.40	80.7	9.3	55.8	2M
370192	OR8300211	88SWELT29	SWW	60.6	65.5	0.39	70.8	9.3	56.6	4M
370193	OR8300801	88SWELT30	SWW	59.6	67.3	0.39	72.6	8.4	55.8	3L
370194	OR8302665	88SWELT31	SWW	60.8	70.6	0.38	78.0	9.6	55.8	2M
370195	OR8302784	88SWELT32	SWW	62.1	70.3	0.40	75.8	9.6	56.7	2M
370196	OR8303725	6/88SWELT33	SWW	60.9	73.2	0.38	82.0	9.2	55.4	2M
370197	OR8303765	6/88SWELT34	SWW	56.7	68.2	0.45	74.5	8.3	57.1	3L
370198	OR8304686	6/88SWELT35	SWW	62.0	75.1	0.41	85.0	9.4	55.5	2M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

* 370000 - second part of the 1987 crop.

NURSCO 86

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	CODI	CODIC 4/	CAVOL	SCSOR	WTIN	NOSCO	RMKS
370170	STEPHENS	CI017956	SWW	8.84	8.85	1230	69.0	333	72	
370171	HILL 81	CI017954	SWW	8.81	8.83	1235	71.0	346	71	
370172	MALCOLM	ORCR8313	SWW	8.66	8.54	1290	75.0	346	74	
370173	DUSTY	PI486429	SWW	8.84	8.75	1320	77.0	324	73	
370174	OVESON	OR7996	SWW	8.64	8.69	1200	67.0	337	71	
370175	TRES	CI017917	CLUB	8.81	8.83	1305	78.0	361	75	Q-FYELD
370176	OSU-21	88SWELT13	SWW	9.10	8.88	1295	78.0	339	75	Q-
370177	OSU-28	88SWELT14	SWW	8.86	8.63	1305	80.0	327	75	Q-
370178	ORCW8314	88SWELT15	SWW	8.42	8.49	1250	73.0	332	72	Q-CODI&SCSOR
370179	ORCW8519	88SWELT16	SWW	8.49	8.60	1205	67.0	350	73	Q-CODI P-SCSOR
370180	ORCW8521	88SWELT17	SWW	8.54	8.66	1265	74.0	346	72	Q-FYELD&CODI
370181	ORCW8625	88SWELT18	SWW	8.66	8.82	1205	67.0	340	70	Q-PROT, P-SCSOR
370182	ORCW8626	88SWELT19	SWW	8.75	8.82	1240	70.0	345	74	Q-SCSOR
370183	ORCW8627	88SWELT20	SWW	8.59	8.63	1225	67.0	342	74	Q-
370184	ORCW8629	88SWELT21	SWW	8.71	8.71	1210	68.0	336	72	Q-
370185	ORCW8631	88SWELT22	SWW	8.59	8.60	1265	73.0	340	76	Q-
370186	ORCW8632	88SWELT23	SWW	8.95	8.73	1290	77.0	343	77	Q-FYELD
370187	ORCW8633	88SWELT24	SWW	8.95	8.97	1240	69.0	326	71	Q-SCSOR
370188	ORCW8635	88SWELT25	SWW	8.95	8.78	1275	75.0	346	75	
370189	ORCW8637	88SWELT26	SWW	8.60	8.53	1250	72.0	351	74	Q-SCSOR&CODI
370190	ORCW8724	88SWELT27	SWW	8.97	8.83	1300	77.0	335	75	Q-FYELD
370191	ORCW8725	88SWELT28	SWW	8.79	8.71	1260	72.0	346	74	Q-FYELD&SCSOR
370192	OR8300211	88SWELT29	SWW	8.82	8.75	1245	73.0	317	72	P-FYELD
370193	OR8300801	88SWELT30	SWW	8.79	8.61	1230	73.0	313	73	P-
370194	OR8302665	88SWELT31	SWW	8.89	8.84	1240	71.0	339	77	Q-FYELD&SCSOR
370195	OR8302784	88SWELT32	SWW	8.80	8.76	1235	70.0	324	73	Q-FYELD&SCSOR
370196	OR8303725	88SWELT33	SWW	8.75	8.66	1245	74.0	340	70	
370197	OR8303765	88SWELT34	SWW	8.75	8.56	1270	76.0	332	73	
370198	OR8304686	88SWELT35	SWW	8.71	8.65	1200	67.0	356	75	Q-P-SCSOR

COMMENTS: Several of the selections footnoted a promising (6/) have questionable/marginal flour yields and are so noted in "Remarks".

Advancement of these should be done with caution and closely followed for milling quality. Others, such as 88SWELT35, were questionable in sponge cake, but strong in milling and other bake tests.

NURSCO 87

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/ 1/		1/ 1/	3/ 3/	
* 370199	WANSER	C1013844	HRW	61.0	73.4	0.38	87.0	11.3	60.9	3H
370200	HATTON	C1017772	HRW	63.7	72.7	0.37	86.1	11.7	63.1	4H
370201	BATUM	P1495013	HRW	59.8	71.0	0.37	83.7	9.9	61.1	4M
370202	CENTURA		HRW	62.3	66.5	0.39	75.3	11.9	62.7	4H
370203	TSN-B1	88HRELT5	HRW	60.0	66.9	0.39	75.4	11.9	62.7	4H
370204	TSN-B3	88HRELT6	HRW	62.4	68.6	0.38	78.2	9.9	65.4	8M
370205	TSN-B4	88HRELT7	HRW	62.7	68.6	0.38	77.5	10.3	61.5	6M
370206	ORCR8313	88HRELT8	HRW	62.8	70.2	0.37	79.9	10.6	60.3	4M
370207	ORCR8414	88HRELT9	HRW	61.4	66.7	0.36	74.2	11.2	60.3	3H
370208	TSN-B2	88HRELT10	HRW	60.9	72.6	0.35	87.2	10.9	59.3	3M
370209	ORCR8601	88HRELT11	HRW	61.2	70.1	0.35	82.6	11.7	60.5	3H
370210	ORCR8602	88HRELT12	HRW	60.9	63.2	0.39	67.0	10.6	59.8	7M
370211	ORCR8603	88HRELT13	HRW	60.2	68.5	0.40	74.9	11.1	57.3	3M
370212	ORCR8604	88HRELT14	HRW	61.2	68.4	0.40	78.1	11.4	58.5	4M
370213	ORCR8608	88HRELT15	HW	62.9	65.1	0.38	74.2	11.5	58.9	2H
370214	ORCR8718	6/ 88HRELT16	HRW	62.8	70.7	0.37	83.8	11.1	59.4	4H
370215	OR8300027	88HRELT17	HRW	61.7	68.7	0.36	80.8	10.7	57.8	4H
370216	OR8300282	88HRELT18	HRW	62.0	66.2	0.42	72.4	10.6	55.6	2M
370217	OR8301134	88HRELT19	HRW	63.9	68.1	0.38	78.8	10.3	60.0	6M
370218	OR8301455	88HRELT20	HRW	59.6	65.1	0.42	71.7	10.1	57.4	4M
370219	OR8302306	6/ 88HRELT21	HRW	59.8	67.9	0.37	79.3	10.9	60.8	3H

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein.

*370000 is the second part of the 1987 crop.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

HARD RED CROSSING BLOCK NURSERY

NURSCO 88

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/ 3/		1/ 3/		
*370220	KHARKOF	C1001442	HRW	60.4	70.8	0.31	90.0	11.4	62.6	3M
370221	WANSER	C1013844	HRW	59.6	72.7	0.31	92.3	10.7	61.7	4M
370222	CHEYENNE	C1008885	HRW	60.0	73.5	0.36	90.4	12.3	63.3	7M
370223	NEWTON	VM801049	HRW	63.2	69.8	0.27	91.2	10.4	61.0	4M
370224	COLT	NE078696	HRW	63.2	71.7	0.30	91.8	10.5	62.3	6M
370225	CHISOLM		HRW	64.4	72.4	0.34	90.1	10.7	62.8	5H
370226	TAM 107		HRW	63.6	67.2	0.29	87.6	10.5	61.9	3M
370227	TAM 108		HRW	63.6	69.9	0.27	91.1	9.0	61.2	3L
370228	PLAINSMAN5		HRW	61.2	70.9	0.32	89.5	13.5	67.9	6H
370229	MANNING	C1017846	HRW	63.6	71.5	0.29	92.0	9.7	63.2	7M
370230	ARKAN		HRW	62.8	70.5	0.32	89.5	11.3	63.8	2H
370231	STEPHENS	C1017596	SWW	60.8	73.0	0.32	93.6	9.6	59.4	2L
370232	ORCR8414	6/88HRWCB8	HRW	61.6	69.8	0.28	90.5	10.2	62.1	6M
370233	ORCR8601	6/88HRWCB10	HRW	62.0	71.3	0.27	92.5	10.7	61.7	6M
370234	MT79125	6/88HRWCB30	HRW	61.2	69.7	0.25	92.2	10.1	61.1	4M
370235	UT156751	88HRWCB33	HRW	64.0	73.0	0.29	93.2	9.5	61.3	4M
370236	UT156775	88HRWCB34	HRW	63.6	71.4	0.32	90.0	9.2	61.2	4M
370237	UT156516	88HRWCB35	HRW	64.0	68.4	0.30	88.2	8.6	61.1	3M
370238	CARSTEN/GIGANT	88HRWCB69	HRW	61.2	74.2	0.36	91.1	9.4	59.4	3M
370239	BK85698	88HRWCB88	HRW	64.4	66.3	0.33	84.3	10.9	63.0	7M
370240	KS4578	6/88HRWCB93	HRW	62.4	71.5	0.38	87.1	11.9	60.3	2H
370241	KS5210	6/88HRWCB94	HRW	62.4	69.8	0.35	87.1	12.4	62.3	4H
370242	OK81322	88HRWCB95	HRW	62.4	65.5	0.36	81.9	9.3	59.5	3M
370243	GPMT5028	88HRWCB97	HRW	60.8	70.8	0.35	87.8	8.6	60.2	3L
370244	GPMT5026	88HRWCB98	HRW	62.4	68.5	0.30	88.1	10.1	60.0	4M
370245	BK85266	88HRWCB108	HRW	64.8	68.7	0.32	87.2	8.7	61.3	6L
370246	BK85242	88HRWCB110	HRW	63.6	70.6	0.32	89.2	11.1	62.2	6M
370247	BK85751	88HRWCB112	HRW	64.8	69.4	0.33	87.4	8.7	60.2	6L
370248	BK85806	88HRWCB113	HRW	63.6	65.0	0.33	82.8	10.0	64.8	8M
370249	BK85756	88HRWCB114	HRW	63.6	71.3	0.34	88.8	9.6	59.8	7M
370250	BK85210	88HRWCB116	HRW	64.0	72.1	0.30	91.8	9.9	61.2	7M
370251	BK85846	88HRWCB118	HRW	64.0	69.4	0.34	87.3	8.0	59.2	5L
370252	GPMT5210	6/88HRWCB121	HRW	62.8	69.8	0.35	86.9	10.9	63.6	4H
370253	ID0388	6/88HRWCB10	HRW	62.0	70.8	0.30	90.4	9.8	62.7	7M
370254	WA7524	6/88HRWCB11	HRW	62.4	71.8	0.29	92.4	12.1	63.8	4H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

*370000 is the second half of the 1987 crop.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 88

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
370220 KHARKOF		C1001442	HRW	64.7	63.3	1.3	850	770	8	
370221 WANSER		C1013844	HRW	64.1	63.4	2.8	835	787	3	
370222 CHEYENNE		C1008885	HRW	67.3	65.0	3.7	825	682	3Low	LVOL
370223 NEWTON		VM801049	HRW	63.1	62.7	2.6	860	835	3	
370224 COLT		NE078696	HRW	63.5	63.0	2.7	820	789	3	
370225 CHISOLM			HRW	65.2	64.5	4.1	850	807	2	
370226 TAM 107			HRW	64.1	63.6	2.4	775	744	6Low	LVOL P-BCRGR&MT
370227 TAM 108			HRW	60.4	61.4	1.7	775	837	7P-MTIME&BCRGR	
370228 PLAINSMAN5			HRW	73.1	69.6	5.8	925	708	2Low	LVOL
370229 MANNING		C1017846	HRW	64.6	64.9	3.9	735	754	6Low	LVOL P-BCRGR
370230 ARKAN			HRW	65.8	64.5	2.2	965	884	2P-MTIME	
370231 STEPHENS		C1017596	SWW	59.2	59.6	1.3	700	724	9"Soft"	
370232 ORCR8414		88HRWCB8	HRW	65.5	65.3	3.1	835	823	2	
370233 ORCR8601		88HRWCB10	HRW	65.6	64.9	3.2	850	807	3	
370234 MT79125		88HRWCB30	HRW	62.9	62.8	2.5	835	829	3Q-MTIME	
370235 UT156751		88HRWCB33	HRW	62.5	63.0	2.9	775	806	7P-BCRGR	
370236 UT156775		88HRWCB34	HRW	62.1	62.9	3.2	790	840	7P-BCRGR	
370237 UT156516		88HRWCB35	HRW	61.4	62.8	1.9	685	772	9P-MTIME, LVOL&BCRGR	
370238 CARSTEN/GIGANT		88HRWCB69	HRW	60.5	61.1	2.6	630	667	8P-	"
370239 BK85698		88HRWCB88	HRW	63.6	67.7	4.1	765	709	4P-FYELD, LVOL&BCRGR	
370240 KS4578		88HRWCB93	HRW	63.9	62.0	2.4	900	782	2Q-MTIME	
370241 KS5210		88HRWCB94	HRW	67.4	65.0	3.4	975	826	2	
370242 OK81322		88HRWCB95	HRW	60.5	61.2	3.2	695	738	8P-BCRGR&LVOL	
370243 GPMT5028		88HRWCB97	HRW	60.0	61.4	3.0	650	737	8P-	"
370244 GPMT5026		88HRWCB98	HRW	61.8	61.7	3.2	910	904	4Q-BCRGR	
370245 BK85266		88HRWCB108	HRW	61.7	63.0	4.6	600	681	8P-LVOL&BCRGR	
370246 BK85242		88HRWCB110	HRW	67.5	66.4	4.0	810	742	4Q-	"
370247 BK85751		88HRWCB112	HRW	60.6	61.9	4.6	710	791	6P-BCRGR	
370248 BK85806		88HRWCB113	HRW	69.0	69.0	5.1	775	775	4P-FYELD&BCRGR	
370249 BK85756		88HRWCB114	HRW	61.1	61.5	3.5	735	760	6Q-BCRGR	
370250 BK85210		88HRWCB116	HRW	62.8	62.9	3.2	665	671	8 MIXED	
370251 BK85846		88HRWCB118	HRW	58.9	60.9	4.0	570	694	9P-LVOL&BCRGR	
370252 GPMT5210		88HRWCB121	HRW	66.2	65.3	3.5	815	759	2	
370253 ID0388		88HRWCB10	HRW	66.7	66.9	3.4	755	767	3Q-BCRGR	
370254 WA7524		88HRWCB11	HRW	67.6	65.5	3.0	830	700	2Q-LVOL	

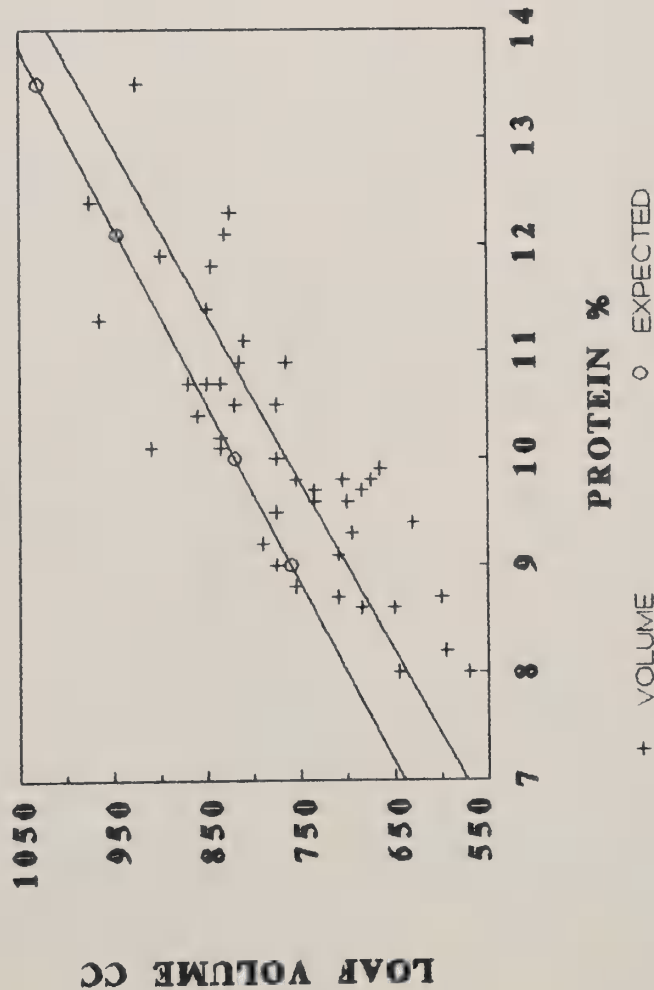
NURSCO 88

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
370255	UT156712	88HRMCB12	HRW	64.0	72.1	0.31	91.6	9.8	61.9	6M
370256	BK85802	88HRMCB70	HRW	64.0	67.1	0.37	83.3	8.2	61.1	3M
370257	BK85800	88HRMCB72	HRW	63.6	67.1	0.35	84.1	8.0	61.6	5M
370258	BK85788	88HRMCB74	HRW	65.2	69.1	0.32	87.8	10.7	65.3	8M
370259	BK85786	6/ 88HRMCB79	HRW	64.8	69.5	0.36	86.0	11.8	64.9	4H
370260	BK85774	88HRMCB85	HRW	65.2	69.1	0.32	87.6	9.8	64.7	8M
370261	BK85810	88HRMCB84	HRW	64.8	64.5	0.32	82.9	9.1	64.8	8M
370262	BK85150	88HRMCB87	HRW	66.4	67.4	0.30	87.3	9.8	65.5	3H
370263	BK85843	88HRMCB226	HRW	64.0	67.3	0.33	85.5	9.7	62.5	8M

LOAF VOLUME VS PROTEIN
HARD RED CROSSING BLOCK



Statistics
Size 44
Total 33960
Mean 771.818182
Maximum 975
Minimum 570
Standard Dev. 98.571724
Standard Error 14.860247
95% Confidence 29.126083
99% Confidence 38.339436
a0 126.652814
a1 63.762974
a2 0
a3 0
a4 0
a5 0
a6 0
Rval 0.809055

Graph A

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
370255	UT156712	88HRMCB12	HRW	63.4	63.6	3.0	675	687	8	MIXED
370256	BK85802	88HRMCB70	HRW	61.0	62.8	2.9	595	707	8P-FYELD, LVOL&BCRGR	"
370257	BK85800	88HRMCB72	HRW	61.3	63.3	3.0	645	769	8P-	"
370258	BK85788	88HRMCB74	HRW	67.7	67.0	4.4	870	827	2	"
370259	BK85786	88HRMCB79	HRW	70.4	68.6	4.0	845	733	2Q-LVOL	"
370260	BK85774	88HRMCB85	HRW	67.2	67.4	5.2	755	767	6P-LVOL&BCRGR	"
370261	BK85810	88HRMCB84	HRW	68.6	69.5	5.3	710	766	5P-	"
370262	BK85150	88HRMCB87	HRW	68.0	68.2	2.8	705	717	6P-	"
370263	BK85843	88HRMCB226	HRW	63.9	64.2	4.0	685	704	8P-	"

COMMENTS: Several of these crosses were poor in baking performance. As a group they were low in loaf volume per protein content as shown in the plot on page 2. Several of the mid-west varieties were similarly poor in baking.

NURSCO 89

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
370264	MCKAY C1017983	AGYT1-1	HRS	64.8	72.9	0.35	90.4	11.6		
370265	BORAH C1017267	AGYT1-2	HRS	64.0	72.0	0.30	91.7	12.5		
370266	4075	AGYT1-7	HRS	65.2	71.4	0.40	86.0	11.8		
370267	4084	6/ AGYT1-10	HRS	64.8	70.8	0.33	88.8	12.1		
370268	4090	6/ AGYT1-11	HRS	64.4	71.4	0.36	88.0	12.1		
370269	4095	AGYT1-12	HRS	62.4	67.5	0.38	82.9	11.1		
370270	4096	AGYT1-13	HRS	64.4	70.7	0.38	86.4	12.3		
370271	(ARCSB 68) 4128	6/ AGYT1-15	HRS	65.6	71.5	0.36	88.3	11.5		
370272	4102	AGYT1-16	HRS	65.2	69.6	0.40	84.2	11.8		
370273	4104	AGYT1-17	HRS	64.4	68.7	0.39	83.5	11.1		
370274	4115	AGYT1-20	HRS	66.0	69.5	0.35	86.5	11.7		
370275	4126	AGYT1-23	HRS	64.0	70.4	0.34	88.0	13.4		
370276	4130	5/ AGYT1-24	HRS	64.4	72.9	0.32	91.7	13.8		
370277	4137	AGYT1-25	HRS	65.2	68.3	0.39	83.2	13.0		
370278	4161	AGYT1-28	HRS	64.8	69.8	0.36	86.7	11.7		
370279	4163	6/ AGYT1-29	HRS	64.8	70.2	0.32	89.0	12.5		
370280	4870148	AGYT1-30	HRS	62.4	70.7	0.37	87.1	12.1		
370281	4169	AGYT1-31	HRS	64.4	70.5	0.38	86.0	11.9		
370282	4170	AGYT1-32	HRS	64.0	70.7	0.38	86.3	11.9		
370283	4175	AGYT1-33	HRS	64.8	70.6	0.37	86.8	12.5		
370284	4176	AGYT1-34	HRS	64.4	69.8	0.37	85.7	12.8		
370285	4180	AGYT1-36	HRS	64.0	68.5	0.38	84.3	12.4		

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 89		MADRAS, OR			W.E. KRONSTAD				
LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR
<hr/>									
370264	MCKAY C1017983	AGYT1-1	HRS	NO BAKING -- SAMPLES ACCIDENTALLY DISCARDED					
370265	BORAH C1017267	AGYT1-2	HRS						
370266	4075	AGYT1-7	HRS						
370267	4084	AGYT1-10	HRS						
370268	4090	AGYT1-11	HRS						
370269	4095	AGYT1-12	HRS	Poor FYELD					
370270	4096	AGYT1-13	HRS						
370271	(ARCS 68) 4128	AGYT1-15	HRS	Poor FYELD					
370272	4102	AGYT1-16	HRS	Poor FYELD					
370273	4104	AGYT1-17	HRS						
370274	4115	AGYT1-20	HRS						
370275	4126	AGYT1-23	HRS						
370276	4130	AGYT1-24	HRS						
370277	4137	AGYT1-25	HRS						
370278	4161	AGYT1-28	HRS	Poor FYELD					
370279	4163	AGYT1-29	HRS						
370280	4870148	AGYT1-30	HRS						
370281	4169	AGYT1-31	HRS						
370282	4170	AGYT1-32	HRS						
370283	4175	AGYT1-33	HRS						
370284	4176	AGYT1-34	HRS						
370285	4180	AGYT1-36	HRS	Poor FYELD					

COMMENTS: The flour samples for this nursery were accidentally discarded prior to mixograph and baking tests. The footnotes apply only to the flour milling quality. We regret the loss of these valuable data.

W.E. KRONSTAD

MADRAS, OR

NURSCO 90

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
*370286	MCKAY CI017983	AGYT2-1	HRS	63.2	71.9	0.36	88.5	10.4	66.1	3M
370287	BORAH CI017267	AGYT2-2	HRS	63.6	70.9	0.31	90.1	11.7	66.7	2H
370288	4183	AGYT2-3	HRS	63.6	67.7	0.37	83.9	10.9	65.4	4M
370289	4190	6/ AGYT2-5	HRS	63.6	71.8	0.39	86.8	10.9	66.5	3M
370290	4193	6/ AGYT2-7	HRS	64.0	70.4	0.39	85.6	12.3	66.9	4H
370291	4205	AGYT2-9	HRS	65.2	69.1	0.38	84.7	12.4	70.5	6H
370292	4206	AGYT2-10	HRS	64.0	69.4	0.33	87.5	11.5	67.9	5H
370293	4225	AGYT2-16	HRS	64.0	70.3	0.40	84.7	14.0	65.7	2H
370294	4226	6/ AGYT2-17	HRS	65.6	71.0	0.34	88.9	13.0	68.1	4H
370295	4232	5/ AGYT2-18	HRS	64.4	70.3	0.36	86.9	12.1	68.2	4H
370296	4233	5/ AGYT2-19	HRS	64.4	70.8	0.36	87.8	12.2	68.2	3H
370297	4243	AGYT2-21	HRS	65.6	71.6	0.39	86.6	11.3	69.3	5H
370298	4244	AGYT2-22	HRS	63.6	70.9	0.42	84.7	11.6	68.6	6H
370299	4250	AGYT2-23	HRS	63.6	68.6	0.36	85.1	13.3	72.2	8H
370300	4251	AGYT2-24	HRS	63.6	68.2	0.35	85.1	13.1	72.6	7H
370301	4252	AGYT2-25	HRS	64.8	68.3	0.35	85.2	14.0	72.5	7H
370302	4255	6/ AGYT2-26	HRS	63.2	70.1	0.35	87.4	12.8	67.7	3H
370303	4256	AGYT2-27	HRS	64.8	69.3	0.35	86.3	12.0	67.3	2H
370304	4259	AGYT2-28	HRS	64.4	67.9	0.39	82.9	11.4	64.8	3M
370305	4277	6/ AGYT2-31	HRS	64.4	69.4	0.37	85.6	13.1	68.8	4H
370306	4286	AGYT2-32	HRS	64.0	68.6	0.34	86.5	14.7	68.7	2H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

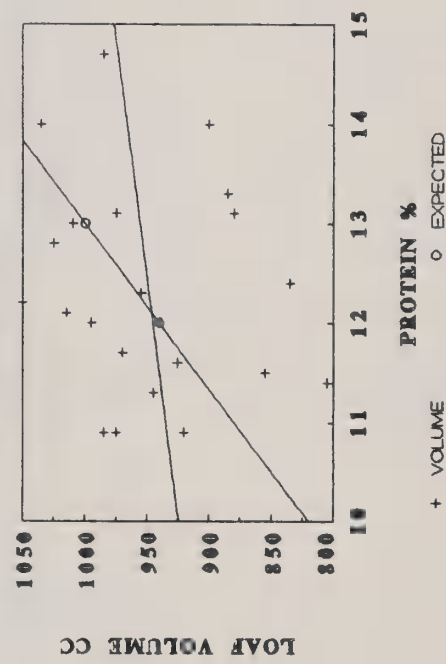
4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

*370000 is the second part of the 1987 crop.

LOAF VOLUME VS PROTEIN
ARGENTINE YIELD TRIALS #2



LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
370286	MCKAY C1017983	AGYT2-1	HRS	65.2	66.8	2.6	920	1019	4	
370287	BORAH C1017267	AGYT2-2	HRS	68.1	68.4	2.3	970	989	2	
370288	4183	AGYT2-3	HRS	66.0	67.1	2.5	985	1053	3	Q-FYELD
370289	4190	AGYT2-5	HRS	65.1	66.2	2.1	975	1043	3	
370290	4193	AGYT2-7	HRS	68.9	68.6	3.2	955	936	2	
370291	4205	AGYT2-9	HRS	71.6	71.2	5.9	835	810	4	Q-FYELD, LVOL&BCRGR
370292	4206	AGYT2-10	HRS	69.1	69.6	3.7	855	886	3	P-LVOL
370293	4225	AGYT2-16	HRS	69.4	67.4	2.4	1035	911	5	P-BCRGR
370294	4226	AGYT2-17	HRS	69.8	68.8	3.7	1010	948	2	
370295	4232	AGYT2-18	HRS	69.0	68.9	3.2	1015	1009	2	
370296	4233	AGYT2-19	HRS	70.1	69.9	3.3	1050	1038	2	
370297	4243	AGYT2-21	HRS	70.3	71.0	5.3	945	988	5	Q-P-BCRGR
370298	4244	AGYT2-22	HRS	69.9	70.3	6.1	925	950	2	Q-LVOL
370299	4250	AGYT2-23	HRS	75.2	73.9	7.5	885	804	4	P-FYELD, LVOL&BCRGR
370300	4251	AGYT2-24	HRS	75.4	74.3	7.6	880	812	3	P- " "
370301	4252	AGYT2-25	HRS	76.2	74.2	7.9	900	776	4	P- " "
370302	4255	AGYT2-26	HRS	70.2	69.4	2.6	1025	975	2	
370303	4256	AGYT2-27	HRS	69.0	69.0	3.0	995	995	4	Q-FYELD&BCRGR
370304	4259	AGYT2-28	HRS	65.9	66.5	2.0	805	842	8	P-FYELD, MT, LVOL&BCRGR
370305	4277	AGYT2-31	HRS	71.6	70.5	3.8	975	907	2	Q-FYELD
370306	4286	AGYT2-32	HRS	73.1	70.4	2.1	985	818	2	P-FYELD&LVOL

COMMENTS: As seen from the plot of loaf volume vs flour protein (page 1) there is a wide range of baking quality within this group of selections.

Correlation coefficient of .16 (normal is .907) indicates this wide range. Protein contents were generally at a good level for meaningful results. Test weights, similarly, were good (63-65). Flour yields of several were questionable (See "Remarks"). The other major deficiencies were low loaf volume and heavy crumb grain.

NURSCO 91

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
*370307	MCKAY C1017983	AGYT3-1	HRS	63.2	72.7	0.36	89.4	10.9	68.0	2H
370308	BORAH C1017267	AGYT3-2	HRS	62.8	72.7	0.36	89.7	11.2	67.5	2H
370309	4327	AGYT3-4	HRS	63.6	71.2	0.42	84.5	11.3	69.7	5H
370310	4328	AGYT3-5	HRS	63.6	70.1	0.37	86.1	12.6	68.3	4H
370311	4331	6/ AGYT3-7	HRS	64.8	71.0	0.37	87.3	11.8	68.4	5H
370312	4343	AGYT3-10	HRS	64.0	71.1	0.39	86.1	11.3	65.7	4M
370313	4347	AGYT3-12	HRS	65.6	70.6	0.38	86.3	12.2	69.6	4H
370314	4870148	AGYT3-15	HRS	63.2	73.0	0.36	90.0	10.1	64.6	3M
370315	4354	6/ AGYT3-16	HRS	65.6	72.0	0.35	89.1	13.5	69.0	3H
370316	4355	AGYT3-17	HRS	64.4	67.8	0.41	82.0	11.1	63.8	2H
370317	4356	AGYT3-18	HRS	64.8	71.4	0.39	86.7	11.9	65.4	4M
370318	4357	AGYT3-19	HRS	62.4	66.4	0.43	79.2	10.5	63.3	3M
370319	4364	AGYT3-21	HRS	66.0	70.6	0.39	85.8	12.7	68.1	3H
370320	4389	AGYT3-23	HRS	64.8	70.5	0.37	86.6	11.1	62.6	1H
370321	4397	AGYT3-25	HRS	64.4	71.0	0.45	83.1	11.5	64.7	3M
370322	4398	6/ AGYT3-26	HRS	64.0	69.3	0.39	84.4	12.3	67.6	5H
370323	4413	AGYT3-28	HRS	64.8	69.0	0.37	84.9	12.0	66.0	4H
370324	4424	6/ AGYT3-29	HRS	62.0	70.7	0.33	88.8	13.1	67.3	2H
370325	4870690	5/ AGYT3-30	HRS	63.2	72.0	0.32	90.8	11.7	65.8	6M
370326	4870611	AGYT3-32	HRS	60.4	70.6	0.39	86.0	10.3	65.1	4M
370327	4870612	AGYT3-33	HRS	61.6	70.6	0.41	84.9	10.4	63.5	3M
370328	4870614	6/ AGYT3-35	HRS	64.4	73.0	0.33	91.3	11.4	66.0	6M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

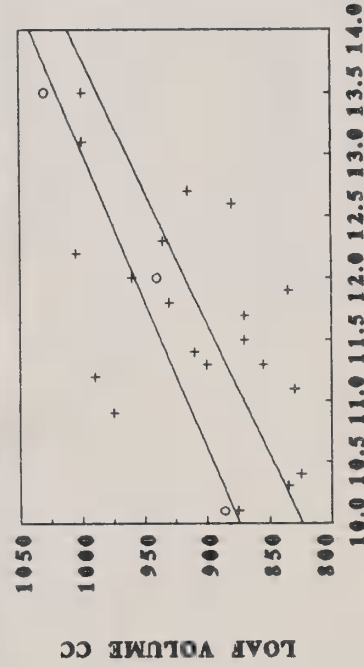
4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

*370000 is the second part of the 1987 crop.

LOAF VOLUME VS PROTEIN
ARGENTINE YIELD TRIALS #1



Statistics	Graph A
Size	22
Total	19750
Mean	897.727273
Maximum	1005
Minimum	770
Standard Dev.	70.588129
Standard Error	15.04944
95% Confidence	29.496902
99% Confidence	38.827554
a0	355.473564
a1	46.801026
a2	0
a3	0
a4	0
a5	0
Rval	0.599792

NURSCO 91

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
370307	MCKAY C1017983	AGYT3-1	HRS	65.6	66.7	3.1	975	1043	4	
370308	BORAH C1017267	AGYT3-2	HRS	67.4	68.2	2.8	990	1040	3	Q-FYELD&LVOL
370309	4327	AGYT3-4	HRS	70.7	71.4	4.5	855	898	2	Q-FYELD
370310	4328	AGYT3-5	HRS	69.6	69.0	3.7	880	843	2	"
370311	4331	AGYT3-7	HRS	68.9	69.1	4.2	930	942	2	"
370312	4343	AGYT3-10	HRS	65.7	66.4	3.2	900	943	3	Q-LVOL
370313	4347	AGYT3-12	HRS	71.0	70.8	3.6	1005	993	3	Q-FYELD
370314	4870148	AGYT3-15	HRS	63.4	65.3	2.8	875	993	6	P-BCRGR
370315	4354	AGYT3-16	HRS	71.7	70.2	3.6	1000	907	2	Q-LVOL
370316	4355	AGYT3-17	HRS	63.6	64.5	1.9	830	886	7	P-LVOL, BCRGR, MT&FYELD
370317	4356	AGYT3-18	HRS	66.0	66.1	3.0	835	841	5	P-LVOL&BCRGR
370318	4357	AGYT3-19	HRS	63.0	64.5	2.0	770	863	6	P-LVOL, BCRGR&FYELD
370319	4364	AGYT3-21	HRS	70.0	69.3	4.2	915	872	2	Q-FYELD&LVOL
370320	4389	AGYT3-23	HRS	62.9	63.8	1.7	785	841	8	P-MT, LVOL&BCRGR
370321	4397	AGYT3-25	HRS	64.4	64.9	2.0	870	901	5	Q-FYELD P-MT, LV&BCRGR
370322	4398	AGYT3-26	HRS	69.6	69.3	5.7	935	916	2	Q-FYELD
370323	4413	AGYT3-28	HRS	67.7	67.7	3.0	960	960	4	Q-FYELD&BCRGR
370324	4424	AGYT3-29	HRS	70.1	69.0	2.5	1000	932	2	Q-FYELD
370325	4870690	AGYT3-30	HRS	67.2	67.5	3.9	870	889	3	Q-LVOL
370326	4870611	AGYT3-32	HRS	64.1	65.8	4.0	835	940	4	Q-FYELD, LVOL&BCRGR
370327	4870612	AGYT3-33	HRS	61.6	63.2	2.1	825	924	4	Q-FYELD, MT, LVOL&BCRGR
370328	4870614	AGYT3-35	HRS	66.1	66.7	3.1	910	947	4	Q-BCRGR

COMMENTS: These samples exhibit a wide range in inherent baking quality. All but a few were well below the expected loaf volume for their protein level (plot on page 1). Some are footnoted as promising, but are marginal for one factor or another (See "Remarks"). Few appear equal to the check varieties McKay and Borah.

NURSCO 92

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
* 370329	MCKAY C1017983	AGYT4-1	HRS	60.4	69.7	0.37	85.6	12.0	68.9	4H
370330	BORAH C1017267	AGYT4-2	HRS	60.4	70.5	0.37	86.8	12.3	68.2	3H
370331	4870617	6/ AGYT4-4	HRS	61.6	70.9	0.39	86.3	11.2	67.3	3H
370332	4870618	5/ AGYT4-5	HRS	60.4	70.9	0.39	86.3	12.5	65.5	3M
370333	4870621	AGYT4-8	HRS	62.8	71.5	0.39	86.6	11.9	63.8	2M
370334	4870622	6/ AGYT4-9	HRS	61.6	71.0	0.38	86.5	11.8	65.2	4M
370335	4870623	AGYT4-10	HRS	57.2	67.7	0.39	82.8	13.1	69.7	5H
370336	4870626	6/ AGYT4-13	HRS	59.6	69.6	0.39	84.5	14.4	73.4	7H
370337	4870148	5/ AGYT4-15	HRS	63.6	71.3	0.38	86.8	11.7	66.1	3H
370338	4870633	AGYT4-21	HRS	63.2	71.2	0.45	83.0	14.2	71.5	2H
370339	4870634	6/ AGYT4-22	HRS	63.2	71.4	0.44	84.0	13.7	70.7	2H
370340	4870636	AGYT4-24	HRS	65.2	73.1	0.42	86.8	14.4	69.2	2H
370341	4870637	AGYT4-25	HRS	64.8	72.9	0.42	86.8	14.2	69.1	2H
370342	4870638	6/ AGYT4-26	HRS	63.2	71.2	0.44	83.6	14.0	69.0	3H
370343	4870640	AGYT4-28	HRS	63.6	71.2	0.44	83.8	14.7	67.3	2H
370344	4870641	AGYT4-29	HRS	62.8	70.2	0.43	83.1	14.7	70.7	5H
370345	4870642	6/ AGYT4-31	HRS	63.6	72.0	0.44	84.5	14.1	68.8	2H
370346	4870644	AGYT4-33	HRS	64.4	69.3	0.45	81.2	14.1	66.9	2H
370347	4870645	6/ AGYT4-34	HRS	65.2	71.2	0.42	85.0	14.1	67.7	2H
370348	4870646	6/ AGYT4-36	HRS	62.4	69.4	0.36	85.8	12.9	70.0	5H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 13% Protein.

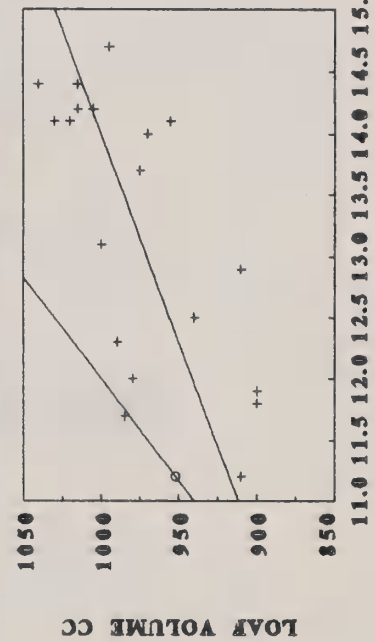
4/ Observed Values Corrected to 13% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

*370000 is the second part of the 1987 crop.

LOAF VOLUME VS PROTEIN
ARGENTINE YIELD TRIALS #4



USDA, SEA AR
WESTERN WHEAT
PULLMAN, WA.

ARGENTINE YIELD TRIAL #4

MADRAS, OR

W.E. KRONSTAD

NURSCO 92

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
370329	MCKAY C1017983	AGYT4-1	HRS	68.1	69.1	3.3	980	1042	2	
370330	BORAH C1017267	AGYT4-2	HRS	68.2	68.9	2.9	990	1033	2	
370331	4870617	AGYT4-4	HRS	67.2	69.0	3.2	910	1022	3 Q-BCRGR	
370332	4870618	AGYT4-5	HRS	65.7	66.2	2.8	940	971	3 Q-BCRGR	
370333	4870621	AGYT4-8	HRS	64.4	65.5	1.7	900	968	8 P-MT&BCRGR	
370334	4870622	AGYT4-9	HRS	65.7	66.9	3.5	900	974	2 Q-LVOL	
370335	4870623	AGYT4-10	HRS	71.5	71.4	5.6	1000	994	2 P-FYELD	
370336	4870626	AGYT4-13	HRS	75.5	74.1	7.5	1015	928	3 Q-FYELD&BCRGR	
370337	4870148	AGYT4-15	HRS	66.5	67.8	3.9	985	1066	3 Q-BCRGR	
370338	4870633	AGYT4-21	HRS	68.4	67.2	2.6	1015	941	3 Q-MSCOR&BCRGR	
370339	4870634	AGYT4-22	HRS	72.1	71.4	2.6	975	932	3 Q-LVOL	
370340	4870636	AGYT4-24	HRS	70.3	68.9	2.4	1040	953	3 Q-MT&BCRGR	
370341	4870637	AGYT4-25	HRS	69.5	68.3	2.2	1005	931	2 P-MTIME	
370342	4870638	AGYT4-26	HRS	71.2	70.2	2.8	970	908	3 Q-LVOL	
370343	4870640	AGYT4-28	HRS	69.2	67.5	2.0	1055	950	2 P-MTIME	
370344	4870641	AGYT4-29	HRS	74.1	72.4	4.8	995	890	2 P-MTIME&LVOL	
370345	4870642	AGYT4-31	HRS	70.6	69.5	2.9	1020	952	2	
370346	4870644	AGYT4-33	HRS	68.2	67.1	1.8	955	887	3 P-MTIME Q-MSCOR	
370347	4870645	AGYT4-34	HRS	69.5	68.4	2.5	1030	962	3	
370348	4870646	AGYT4-36	HRS	71.6	71.7	5.5	910	916	2 Q-LVOL	

COMMENTS: Protein level of these selections was high, but baking performance was from low relative to the expected volumes (See plot on page 1).

Some that are footnoted appear promising, but may be questionable for some factor. See "Remarks".

NURSCO 93

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/
* 370349 STEPHENS		C1017596	SWW	59.3	73.5	0.39	83.7	10.6	50.3
370350 HILL 81		C1017954	SWW	61.6	74.5	0.38	86.2	11.0	50.9
370351 MALCOLM		ORCR8313	SWW	61.2	74.5	0.37	85.9	8.7	52.0
370352 OR8400813H		6/88SWELT36	SWW	62.2	74.0	0.37	86.4	9.1	52.8
370353 OR8400814H		88SWELT37	SWW	61.6	74.1	0.37	86.8	8.5	54.9
370354 OR8400815H		5/88SWELT38	SWW	61.7	74.0	0.37	86.8	8.6	54.9
370355 OR8400836S		6/88SWELT39	SWW	60.5	74.8	0.38	86.4	9.7	51.8
370356 OR8401073H		6/88SWELT40	SWW	61.8	74.6	0.37	87.4	8.9	53.2
370357 OR8401386P		5/88SWELT41	SWW	60.3	75.2	0.43	83.9	9.2	51.4
370358 OR8401438P		6/88SWELT42	SWW	60.7	75.5	0.40	87.6	9.2	53.8
370359 OR8401464P		6/88SWELT43	SWW	59.6	74.9	0.42	84.0	8.9	52.8
370360 OR813639		88SWRAN11	SWW	61.5	74.8	0.38	86.9	9.8	53.4
370361 OR8300058		88SWRAN12	SWW	58.8	75.3	0.40	84.6	10.2	53.3
370362 OR8300066		88SWRAN13	SWW	59.3	74.9	0.40	85.1	10.2	54.2
370363 OR8302288		88SWRAN14	SWW	60.0	72.0	0.41	82.1	9.0	53.5
370364 OR8303734		6/88SWRAN15	SWW	60.2	74.9	0.39	87.2	8.9	54.7
370365 OR8400838H		5/88SWRAN16	SWW	59.7	75.5	0.37	89.2	8.6	55.4
370366 OR8401074P		6/88SWRAN18	SWW	61.4	74.6	0.37	87.5	8.9	54.0
370367 OR8400896H		6/88SWRAN17	SWW	60.4	73.9	0.37	86.0	9.5	54.7
370368 OR84012865		6/88SWRAN19	SWW	57.8	74.2	0.42	83.7	8.2	53.9
370369 OR8401389H		88SWRAN20	SWW	60.2	73.3	0.42	81.0	10.1	53.5
370370 OR8401439P		6/88SWRAN21	SWW	60.4	73.4	0.42	82.5	9.5	53.3
370371 OR8401544P		88SWRAN22	SWW	60.5	73.1	0.43	80.6	9.2	53.7
370372 OR8401547P		88SWRAN23	SWW	60.6	72.5	0.42	79.9	9.1	54.6
370373 OR8401866P		88SWRAN24	SWW	58.0	74.2	0.42	83.1	8.6	55.3
370374 OR8401952S		5/88SWRAN25	SWW	60.2	74.8	0.38	87.7	7.9	53.6
370375 OR8401956P		6/88SWRAN26	SWW	59.0	74.3	0.41	84.2	8.6	54.1
370376 OR8402961H		88SWRAN27	SWW	59.4	69.9	0.45	73.0	9.0	54.4
370377 OR8403207H		88SWRAN28	SWW	60.6	72.4	0.41	80.3	8.7	54.7
370378 OR8401954P		88SWRAN29	SWW	60.3	73.6	0.43	80.2	9.1	54.5
370379 OR8401096S		5/88SWRAN30	SWW	61.0	73.8	0.42	82.9	9.6	54.9

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

4/ Observed Values Corrected to 9% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

*370000 is the second part of the 1987 crop.

NURSCO 93

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	MTYPE	CODI	CODIC 4/	CAVOL	SCSOR	RMKS
370349	STEPHENS	C1017596	SWW	2M	8.87	9.05	1265	72.0	
370350	HILL 81	C1017594	SWW	2M	8.84	9.06	1255	73.0	
370351	MALCOLM	ORCR8313	SWW	2M	8.80	8.77	1270	76.0	
370352	OR8400813H	88SWELT36	SWW	2M	9.16	9.17	1250	73.0	Q-CODI&SCSOR
370353	OR8400814H	88SWELT37	SWW	2M	8.91	8.86	1235	71.0	Q-CODI&SCSOR
370354	OR8400815H	88SWELT38	SWW	2M	9.12	9.08	1320	77.0	
370355	OR8400836S	88SWELT39	SWW	1M	8.85	8.93	1280	75.0	
370356	OR8401073H	88SWELT40	SWW	2M	8.64	8.63	1270	76.0	Q-CODI
370357	OR8401386P	88SWELT41	SWW	2M	8.96	8.98	1255	72.0	
370358	OR8401438P	88SWELT42	SWW	2M	9.06	9.08	1280	75.0	
370359	OR8401464P	88SWELT43	SWW	2L	8.99	8.98	1265	75.0	
370360	OR813639	88SWRAN11	SWW	3M	8.94	9.03	1255	73.0	
370361	OR8300058	88SWRAN12	SWW	4M	8.80	8.93	1150	64.0	P-SCSOR Q-CODI
370362	OR8300066	88SWRAN13	SWW	4M	8.47	8.61	1155	64.0	P-CODI&SCSOR
370363	OR8302288	88SWRAN14	SWW	4L	8.81	8.81	1225	72.0	Q-FYELD&CODI
370364	OR8303734	88SWRAN15	SWW	4M	8.82	8.81	1285	74.0	Q-CODI
370365	OR8400838H	88SWRAN16	SWW	3M	8.90	8.86	1335	80.0	Q- "
370366	OR8401074P	88SWRAN18	SWW	2M	8.77	8.76	1295	76.0	Q- "
370367	OR8400896H	88SWRAN17	SWW	3L	9.00	9.05	1300	74.0	
370368	OR84012865	88SWRAN19	SWW	2L	8.92	8.84	1305	76.0	Q-MSCOR
370369	OR8401389H	88SWRAN20	SWW	2M	8.94	9.06	1285	75.0	Q- "
370370	OR8401439P	88SWRAN21	SWW	2M	9.05	9.10	1325	79.0	Q- "
370371	OR8401544P	88SWRAN22	SWW	2M	8.50	8.52	1210	70.0	Q- "
370372	OR8401547P	88SWRAN23	SWW	3M	8.64	8.65	1210	70.0	P- "
370373	OR8401866P	88SWRAN24	SWW	3L	8.77	8.73	1260	68.0	P-CODI&SCSOR
370374	OR8401952S	88SWRAN25	SWW	2L	9.02	8.90	1310	80.0	
370375	OR8401956P	88SWRAN26	SWW	3L	8.81	8.77	1270	76.0	Q-CODI
370376	OR8402961H	88SWRAN27	SWW	4M	8.50	8.50	1170	64.0	P-FYELD, CODI&SCSOR
370377	OR8403207H	88SWRAN28	SWW	2M	8.96	8.93	1220	68.0	P-MSCOR&SCSOR
370378	OR8401954P	88SWRAN29	SWW	3L	8.81	8.82	1220	72.0	Q-MSCOR&SCSOR
370379	OR8401096S	88SWRAN30	SWW	2M	9.17	9.24	1330	80.0	Q-MSCOR

COMMENTS: Several of these selections (footnoted) are equal or better than the controls in overall soft wheat milling and baking quality. Note that some are footnoted but have marginal factors.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

HRW REPLICATED ADVANCED

NURSCO 94

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
* 370380 WANSER		C1013844	HRW	61.6	73.1	0.40	86.1	9.1	58.5	2M
370381 CENTURA			HRW	61.7	65.9	0.38	75.1	11.3	58.2	3M
370382 OR8400027P		88HRELT22	HRW	60.4	72.7	0.38	85.6	9.6	56.7	2M
370383 OR8400157P		5/88HRELT23	HRW	64.1	73.0	0.37	87.1	9.9	58.6	6M
370384 OR8400214H		5/88HRELT24	HRW	62.6	69.6	0.37	81.7	10.5	59.9	4M
370385 OR8401708P		88HRELT25	HRW	59.2	69.8	0.43	79.0	10.7	58.4	7M
370386 OR8303372		88HRRAN6	HRW	59.0	69.5	0.40	79.9	10.9	58.9	3H
370387 OR8400026P		88HRRAN7	HRW	60.3	72.6	0.38	85.8	9.8	56.4	2M
370388 OR8400032H		88HRRAN8	HRW	59.1	67.9	0.39	77.8	7.8	58.6	3L
370389 OR8400159P		88HRRAN9	HRW	63.5	71.6	0.37	85.3	10.0	58.1	6M
370390 OR8400161P		5/88HRRAN10	HRW	63.6	71.7	0.36	85.8	10.3	59.2	6M
370391 OR8400703H		88HRRAN11	HRW	63.9	63.4	0.38	70.2	9.8	58.4	2M
370392 OR8401355P		88HRRAN12	HRW	60.1	68.0	0.40	77.1	9.6	58.9	5M
370393 OR8401707P		88HRRAN13	HRW	61.3	69.9	0.39	81.1	10.0	59.6	3M
370394 OR8401709P		6/88HRRAN14	HRW	58.5	69.7	0.41	80.0	11.0	59.4	3M
370395 OR8403309H		88HRRAN15	HRW	61.7	70.7	0.38	82.4	10.4	57.4	3M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

*370000 is the second set of 1987 crop.

USDA, SEA, AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

HRW REPLICATED ADVANCED

W.E. KRONSTAD

PENDLETON, OR

NURSCO 94

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
370380 WANSER		C1013844	HRW	58.3	59.2	2.0	725	787	6	
370381 CENTURA			HRW	60.2	58.9	2.5	835	754	4	
370382 OR8400027P		88HRELT22	HRW	55.0	55.4	1.1	710	735	8	P-MTIME&BCRGR
370383 OR8400157P		88HRELT23	HRW	58.7	58.8	3.1	790	796	3	
370384 OR8400214H		88HRELT24	HRW	61.1	60.6	2.9	925	894	4	Q-FYELD
370385 OR8401708P		88HRELT25	HRW	62.8	62.1	2.8	770	727	6	Q-FYELD&BCRGR
370386 OR8303372		88HRRAN6	HRW	61.0	60.1	2.5	835	779	7	Q-
370387 OR8400026P		88HRRAN7	HRW	56.9	57.1	2.7	635	647	8	P-LVOL&BCRGR
370388 OR8400032H		88HRRAN8	HRW	57.1	59.3	2.0	645	781	9	P-FYELD,MT,LVOL&BCRGR
370389 OR8400159P		88HRRAN9	HRW	58.8	58.8	3.1	785	785	8	P-BCRGR
370390 OR8400161P		88HRRAN10	HRW	60.7	60.4	3.3	835	816	6	Equal to Wanser
370391 OR8400703H		88HRRAN11	HRW	59.4	59.6	1.9	675	687	9	P-FYELD,MT,LVOL&BCRGR
370392 OR8401355P		88HRRAN12	HRW	60.2	60.6	3.4	715	740	8	P-FYELD&BCRGR
370393 OR8401707P		88HRRAN13	HRW	60.8	60.8	2.3	710	710	8	P-FYELD,MT&BCRGR
370394 OR8401709P		88HRRAN14	HRW	61.6	60.6	2.0	845	783	6	Q-FYELD
370395 OR8403309H		88HRRAN15	HRW	59.0	58.6	2.3	745	720	6	Q-FYELD&MT

COMMENTS: Most of the selections in this nursery are questionable to poor in baking performance compared to the check variety Wanser. Many also have poorer milling quality. See "Remarks" for major deficiencies.

NURSCO 95

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/ 3/		1/ 3/		
* 370396	WANSER	C1013844	HRW	60.8	70.8	0.32	89.6	9.3	57.6	4M
370397	CENTURA		HRW	62.0	70.2	0.32	88.9	11.4	60.0	4M
370398	OR8500046P	88HRRAN16	HRW	62.8	68.7	0.37	84.6	8.5	56.3	3L
370399	OR8500111S	88HRRAN17	HRW	62.0	68.8	0.30	88.5	10.4	56.9	6M
370400	OR8500115P	88HRRAN18	HRW	62.4	70.0	0.32	88.9	9.6	57.1	8M
370401	OR8500136H	88HRRAN19	HRW	64.0	70.6	0.32	89.2	8.5	58.8	6M
370402	OR8500276P	88HRRAN20	HRW	62.0	70.7	0.33	88.7	9.4	55.8	5M
370403	OR8500416H	88HRRAN21	HRW	61.2	70.9	0.35	88.3	10.2	57.6	2H
370404	OR8500493P	88HRRAN22	HRW	62.8	67.7	0.36	84.1	10.8	58.5	2H
370405	OR8500496P	88HRRAN23	HRW	61.2	70.6	0.35	88.1	10.7	56.7	1H
370406	OR8500497H	88HRRAN24	HRW	62.8	69.2	0.32	88.0	9.7	57.2	3M
370407	OR8500509P	88HRRAN25	HRW	63.2	66.2	0.36	82.7	10.2	55.9	2H
370408	OR8500511P	88HRRAN26	HRW	63.2	66.6	0.36	83.2	10.0	57.0	2H
370409	OR8500552H	88HRRAN27	HRW	62.4	68.7	0.33	86.7	8.7	58.1	6M
370410	OR8500563P	88HRRAN28	HRW	63.2	71.6	0.36	88.3	10.1	55.7	3M
370411	OR8500608H	88HRRAN29	HRW	62.4	71.6	0.35	89.0	10.4	55.2	2M
370412	OR8500617P	88HRRAN30	HRW	62.0	68.8	0.37	85.1	9.0	56.2	3M
370413	OR8500677P	88HRRAN31	HRW	62.4	71.2	0.36	87.8	8.7	57.2	3M
370414	OR8500683P	88HRRAN32	HRW	62.0	68.6	0.38	84.1	9.4	56.8	3M
370415	OR8500694P	88HRRAN33	HRW	61.2	69.8	0.38	85.5	8.4	57.5	3M
370416	OR8500695P	88HRRAN34	HRW	61.2	69.4	0.38	85.2	8.2	58.0	4M
370417	OR8500696P	88HRRAN35	HRW	61.6	70.2	0.37	86.3	8.0	58.0	3M
370418	OR8500704H	88HRRAN36	HRW	62.0	70.2	0.35	87.3	9.6	58.1	4M
370419	OR8500749H	88HRRAN37	HRW	60.8	70.0	0.31	89.3	10.4	56.3	3M
370420	OR8500075P	88HRRAN38	HRW	62.0	71.2	0.30	91.0	10.4	57.4	5M
370421	OR8500803P	88HRRAN39	HRW	60.8	71.3	0.36	88.3	11.8	53.0	1H
370422	OR8500847P	88HRRAN40	HRW	60.8	71.9	0.33	90.1	8.7	53.0	3L
370423	OR8500919H	88HRRAN41	HRW	62.4	68.9	0.35	85.9	8.9	56.8	4M
370424	OR8501018P	88HRRAN42	HRW	61.6	71.6	0.34	89.5	9.7	54.0	2M
370425	OR8502609H	88HRRAN43	HRW	62.8	67.9	0.35	85.3	8.3	58.5	6M
370426	OR8504344P	88HRRAN44	HRW	62.0	70.6	0.33	88.8	8.5	53.2	2M
370427	OR8504351P	88HRRAN45	HRW	61.2	69.5	0.37	85.4	7.8	54.5	2M
370428	OR8504896P	88HRRAN46	HRW	63.6	72.2	0.34	90.1	8.5	55.9	2M
370429	OR8505289P	88HRRAN47	HRW	62.0	70.7	0.35	87.9	8.1	56.1	2M
370430	OR8505424P	88HRRAN48	HRW	62.0	72.0	0.34	89.8	10.6	57.1	4M

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 9% Protein.

*370000 is the second group of the 1987 crop.

NURSCO 95

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
370396	WANSER	C1013844	HRW	59.6	59.3	3.0	740	719	5	
370397	CENTURA		HRW	64.1	61.7	2.9	890	741	3	
370398	OR8500046P	88HRRAN16	HRW	57.5	58.0	2.4	595	626	9	P-MTIME&BCRGR
370399	OR8500111S	88HRRAN17	HRW	60.3	58.9	3.2	850	763	4	= to Wanser, Q-FYELD
370400	OR8500115P	88HRRAN18	HRW	59.4	58.8	4.3	745	708	6	Q-BCRGR
370401	OR8500136H	88HRRAN19	HRW	60.0	60.5	3.7	500	531	9	P-LVOL&BCRGR
370402	OR8500276P	88HRRAN20	HRW	57.9	57.5	3.2	670	645	8	P- " "
370403	OR8500416H	88HRRAN21	HRW	60.5	59.3	2.0	715	641	8	P- " "
370404	OR8500493P	88HRRAN22	HRW	62.0	60.2	2.1	840	728	3	P-FYELD
370405	OR8500496P	88HRRAN23	HRW	60.6	58.9	1.7	765	660	6	P-MTIME, LVOL&BCRGR
370406	OR8500497H	88HRRAN24	HRW	60.1	59.4	2.0	640	597	8	P- " "
370407	OR8500509P	88HRRAN25	HRW	59.3	58.1	2.0	680	606	8	P- " "
370408	OR8500511P	88HRRAN26	HRW	60.2	59.2	2.2	735	673	8	P- " "
370409	OR8500552H	88HRRAN27	HRW	60.0	60.3	2.8	620	639	8	P- " "
370410	OR8500563P	88HRRAN28	HRW	59.0	57.9	1.9	640	572	8	P- " "
370411	OR8500608H	88HRRAN29	HRW	58.8	57.4	1.7	655	568	8	P- " "
370412	OR8500617P	88HRRAN30	HRW	58.4	58.4	2.1	660	660	8	P- " "
370413	OR8500677P	88HRRAN31	HRW	59.1	59.4	2.0	610	629	8	P- " "
370414	OR8500683P	88HRRAN32	HRW	59.4	59.0	2.1	550	525	9	P- " "
370415	OR8500694P	88HRRAN33	HRW	59.1	59.7	2.3	525	562	9	P- " "
370416	OR8500695P	88HRRAN34	HRW	59.4	60.2	2.8	555	605	9	P-LVOL&BCRGR
370417	OR8500696P	88HRRAN35	HRW	59.2	60.2	3.0	550	612	9	P- " "
370418	OR8500704H	88HRRAN36	HRW	60.9	60.3	2.3	715	678	6	P-MTIME, LVOL&BCRGR
370419	OR8500749H	88HRRAN37	HRW	59.9	58.5	2.8	660	573	8	P- " "
370420	OR8500075P	88HRRAN38	HRW	61.0	59.6	2.5	670	583	8	P- " "
370421	OR8500803P	88HRRAN39	HRW	58.0	55.2	1.1	700	526	8	P- " "
370422	OR8500847P	88HRRAN40	HRW	54.9	55.2	2.4	575	594	9	P- " "
370423	OR8500919H	88HRRAN41	HRW	58.9	59.0	3.4	640	646	8	P- " "
370424	OR8501018P	88HRRAN42	HRW	56.9	56.2	1.7	545	502	9	P- " "
370425	OR8502609H	88HRRAN43	HRW	60.0	60.7	2.8	505	548	9	P- " "
370426	OR8504344P	88HRRAN44	HRW	54.4	54.9	1.5	465	496	9	P- " "
370427	OR8504351P	88HRRAN45	HRW	55.5	56.7	1.7	440	514	9	P- " "
370428	OR8504896P	88HRRAN46	HRW	57.6	58.1	2.0	525	556	9	P- " "
370429	OR8505289P	88HRRAN47	HRW	56.9	57.8	1.9	575	631	9	P- " "
370430	OR8505424P	88HRRAN48	HRW	60.4	58.8	2.9	670	571	9	P- " "

COMMENTS: This group of selections are extremely poor in baking quality. Nearly all have short and weak dough properties which yield low loaf volumes with heavy bread crum grain. Selection #88HRRAN17 may be equal to Wanser.

NURSCO 96

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
* 370431	MCKAY C1017983	SPHR1-1	HRS	63.6	73.0	0.36	89.7	10.4	66.4	4M
370432	BORAH C1017267	SPHR1-2	HRS	64.0	72.6	0.31	92.0	12.2	64.9	2H
370433	4870544	6/ SPHR1-3	HRS	64.0	70.4	0.34	88.1	12.7	67.0	5H
370434	4870016	SPHR1-5	HRS	64.0	70.8	0.33	89.2	13.3	68.4	3H
370435	4870019	SPHR1-6	HRS	62.4	70.8	0.41	84.9	13.6	66.2	2H
370436	4870020	6/ SPHR1-7	HRS	62.0	71.2	0.42	84.7	12.6	66.8	3H
370437	4870028	SPHR1-8	HRS	63.6	68.4	0.39	83.6	13.1	67.7	4H
370438	4870037	6/ SPHR1-9	HRS	63.2	69.8	0.32	88.8	13.2	67.7	2H
370439	4870041	SPHR1-10	HRS	63.2	72.2	0.36	89.1	14.2	67.6	3H
370440	4870043	6/ SPHR1-11	HRS	62.8	71.1	0.37	87.5	14.6	68.0	3H
370441	4870044	6/ SPHR1-12	HRS	64.4	71.2	0.39	86.6	13.9	68.3	5H
370442	4870002	SPHR1-13	HRS	60.0	69.5	0.39	84.5	15.6	68.1	3H
370443	4870005	5/ SPHR1-14	HRS	65.2	71.2	0.33	89.3	12.6	67.7	5H
370444	4870006	SPHR1-15	HRS	65.2	71.7	0.34	89.5	12.8	64.9	4H
370445	4870049	6/ SPHR1-17	HRS	64.4	71.3	0.33	89.6	13.7	66.1	4H
370446	4870050	6/ SPHR1-18	HRS	62.0	71.9	0.37	88.2	14.4	69.1	3H
370447	4870055	6/ SPHR1-19	HRS	62.8	72.2	0.36	89.0	12.8	65.9	4H
370448	4870057	6/ SPHR1-20	HRS	62.8	70.0	0.35	87.2	13.0	65.8	2H
370449	4870058	SPHR1-21	HRS	61.2	69.5	0.42	83.2	15.2	69.5	3H
370450	4870064	SPHR1-22	HRS	63.6	69.8	0.31	89.3	13.9	67.6	3H
370451	4870382	SPHR1-26	HRS	64.0	69.9	0.36	86.7	10.8	65.7	2H
370452	4870402	SPHR1-27	HRS	64.4	69.1	0.36	85.8	11.9	65.0	1H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 13% Protein.

4/ Observed Values Corrected to 13% Protein.

*370000 is the second part of the 1987 crop.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 96

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
370431	MCKAY C1017983	SPHR1-1	HRS	64.5	67.1	2.6	905	1066	3	
370432	BORAH C1017267	SPHR1-2	HRS	64.8	65.6	2.0	940	990	3	
370433	4870544	SPHR1-3	HRS	68.4	68.7	3.4	980	999	2	3 Q-LVOL&BCRGR
370434	4870016	SPHR1-5	HRS	69.9	69.6	3.2	970	951	3	Q-FYELD, MTIME&BCRGR
370435	4870019	SPHR1-6	HRS	67.5	66.9	2.4	1005	968	2	
370436	4870020	SPHR1-7	HRS	67.1	67.5	3.2	935	960	2	Q-MSCOR
370437	4870028	SPHR1-8	HRS	68.5	68.4	3.5	950	944	3	Q-FYELD&BCRGR
370438	4870037	SPHR1-9	HRS	68.6	68.4	2.8	1050	1038	2	
370439	4870041	SPHR1-10	HRS	69.5	68.3	3.5	1035	961	4	Q-BCRGR
370440	4870043	SPHR1-11	HRS	70.3	68.7	3.1	1070	971	2	
370441	4870044	SPHR1-12	HRS	69.9	69.0	4.2	1040	984	2	
370442	4870002	SPHR1-13	HRS	71.9	69.3	3.4	1090	929	2	Q-MSCOR&LVOL
370443	4870005	SPHR1-14	HRS	68.5	68.9	3.9	975	1000	2	
370444	4870006	SPHR1-15	HRS	66.9	67.1	3.3	925	937	3	Q-LVOL
370445	4870049	SPHR1-17	HRS	68.0	67.3	3.0	1005	962	2	
370446	4870050	SPHR1-18	HRS	71.7	70.3	4.1	1065	978	2	
370447	4870055	SPHR1-19	HRS	67.4	67.6	3.9	940	952	3	Q-LVOL
370448	4870057	SPHR1-20	HRS	67.0	67.0	2.5	960	960	2	Q-LVOL
370449	4870058	SPHR1-21	HRS	72.9	70.7	3.4	1095	959	2	Q-FYELD&LVOL
370450	4870064	SPHR1-22	HRS	69.7	68.8	2.3	985	929	4	Q-MTIME, LVOL&BCRGR
370451	4870382	SPHR1-26	HRS	64.7	66.9	2.1	800	936	8	P- " "
370452	4870402	SPHR1-27	HRS	64.6	65.7	1.7	770	838	9	P- " "

COMMENTS: Several of these preliminary selections appear about equal to McKay and Borah and are footnoted as promising. Note that some are "borderline" in baking and are questionable in some aspects. (See "Remarks")

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

HRS PRELIMINARY #2

NURSCO 97

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
*370453	MCKAY C1017983	SPHR2-1	HRS	60.0	70.3	0.38	85.9	12.2	64.0	4H
370454	BORAH C1017267	SPHR2-2	HRS	60.0	70.9	0.34	88.5	12.8	64.4	2H
370455	WESTBRED 906R WPB00906	SPHR2-3	HRS	59.6	68.9	0.37	85.1	14.2	66.6	5H
370456	4870016	SPHR2-5	HRS	59.2	67.6	0.34	85.3	13.0	63.3	3H
370457	4870028	6/ SPHR2-8	HRS	60.4	69.2	0.40	83.6	12.6	68.4	6H
370458	4870037	SPHR2-9	HRS	62.0	67.1	0.36	83.4	11.5	62.8	3M
370459	4870041	SPHR2-10	HRS	62.4	69.9	0.36	86.3	12.0	65.5	3H
370460	4870005	SPHR2-14	HRS	64.0	71.5	0.40	86.3	11.6	63.4	1H
370461	4870050	SPHR2-18	HRS	64.0	69.8	0.39	85.0	11.0	62.5	1H
370462	4870055	SPHR2-19	HRS	64.4	71.6	0.36	88.1	10.5	63.4	6M
370463	4870057	6/SPHR2-20	HRS	64.0	70.6	0.38	86.3	11.4	65.5	4H
370464	4870058	SPHR2-21	HRS	62.4	69.6	0.38	85.4	12.2	67.5	4H
370465	4870006	SPHR2-24	HRS	63.2	68.5	0.36	85.0	10.8	61.9	3M
370466	4870382	SPHR2-26	HRS	63.6	68.3	0.36	84.8	11.7	62.6	3M
LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
370453	MCKAY C1017983	SPHR2-1	HRS	65.4	65.2	3.6	990	978	2	
370454	BORAH C1017267	SPHR2-2	HRS	66.4	65.6	2.6	975	925	3	
370455	WESTBRED 906R WPB00906	SPHR2-3	HRS	70.5	68.3	4.3	1065	929	2	
370456	4870016	SPHR2-5	HRS	65.5	64.5	3.4	880	818	6	P-FYELD, LVOL&BCRGR
370457	4870028	SPHR2-8	HRS	70.7	70.1	7.6	965	928	3	Q-MSCOR
370458	4870037	SPHR2-9	HRS	63.0	63.5	2.1	775	806	9	P-FYELD, MT, LVOL&BCRGR
370459	4870041	SPHR2-10	HRS	66.7	66.7	2.4	900	900	5	Q-LVOL&BCRGR
370460	4870005	SPHR2-14	HRS	63.7	64.1	1.9	785	810	8	P-MT, LVOL&BCRGR
370461	4870050	SPHR2-18	HRS	62.2	63.2	1.9	705	767	9	P-" "
370462	4870055	SPHR2-19	HRS	63.6	65.1	3.2	825	918	5	Q-BCRGR
370463	4870057	SPHR2-20	HRS	66.6	67.2	3.0	880	917	3	
370464	4870058	SPHR2-21	HRS	69.4	69.2	3.3	910	898	4	Q-LVOL&BCRGR
370465	4870006	SPHR2-24	HRS	62.4	63.6	2.1	800	874	8	P-MT, LVOL&BCRGR
370466	4870382	SPHR2-26	HRS	64.0	64.3	2.0	785	804	8	P " "

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: Most of these selections performed poorly in bread making. See "Remarks" for major deficiencies.

*370000 is the second part of the 1987 crop.

W.E. KRONSTAD

MADRAS, OR

NURSCO 98

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
370467	MCKAY C1017983	SPHW1-1	HRS	61.2	71.3	0.39	86.3	11.8	64.7	4H
370468	BORAH C1017267	SPHW1-2	HRS	60.4	71.6	0.36	88.4	12.5	64.9	3H
370469	WESTBRED 906R WPB00906	SPHW1-3	HRS	61.2	70.2	0.38	85.7	13.5	66.1	5H
370470	4970559	6/SPHW1-7	HWS	60.4	70.1	0.30	89.8	12.3	66.7	4H
370471	4870560	SPHW1-8	HWS	60.4	70.2	0.38	85.7	11.7	61.3	1M
370472	4870561	6/SPHW1-9	HWS	62.0	70.5	0.41	84.6	11.6	64.8	4H
370473	4870451	SPHW1-10	HWS	62.8	69.0	0.40	83.4	11.5	66.6	4H
370474	4870453	SPHW1-11	HWS	60.8	69.9	0.40	84.5	11.5	65.3	4H
370475	4870470	SPHW1-12	HWS	62.4	69.0	0.36	85.8	11.8	63.6	3H
370476	4870255	5/SPHW1-15	HWS	63.6	72.0	0.37	88.1	12.3	66.4	4H
370477	4870257	SPHW1-16	HWS	62.4	69.9	0.37	85.8	13.3	63.5	2H
370478	4870298	SPHW1-18	HWS	63.6	70.3	0.39	85.4	12.1	61.9	3M
370479	4870305	SPHW1-19	HWS	63.6	70.2	0.37	86.2	10.9	63.1	6M
370480	4870306	SPHW1-20	HWS	62.8	69.1	0.38	84.5	13.3	63.0	2H
370481	4870308	SPHW1-21	HWS	62.0	68.2	0.32	86.7	12.7	61.1	2M
370482	4870330	5/SPHW1-23	HWS	63.2	71.4	0.39	86.6	12.2	65.7	5H
370483	4870333	SPHW1-24	HWS	62.8	69.8	0.43	82.7	11.2	64.2	2H
370484	4870334	SPHW1-25	HWS	62.0	69.6	0.42	83.1	11.3	63.8	2H
370485	4870351	SPHW1-26	HWS	64.4	72.6	0.36	89.6	10.7	62.9	2M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 98

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
370467	MCKAY C1017983	SPHW1-1	HRS	65.7	65.9	3.3	1005	1017	1	
370468	BORAH C1017267	SPHW1-2	HRS	67.1	66.6	2.5	1035	1004	2	
370469	WESTBRED 906R WPB00906	SPHW1-3	HRS	69.3	67.8	3.9	1090	997	2	
370470	4970559	SPHW1-7	HWS	68.7	68.4	4.3	1015	996	2	
370471	4870560	SPHW1-8	HWS	61.7	62.0	1.3	920	939	9	P-MTIME, LVOL&BCRGR
370472	4870561	SPHW1-9	HWS	66.1	66.5	3.4	980	1005	1	
370473	4870451	SPHW1-10	HWS	67.8	68.3	3.9	970	1001	2	Q-FYELD
370474	4870453	SPHW1-11	HWS	66.5	67.0	3.3	890	921	2	Q-LVOL
370475	4870470	SPHW1-12	HWS	65.1	65.3	2.6	900	912	3	Q-FYELD&LVOL
370476	4870255	SPHW1-15	HWS	68.4	68.1	3.7	1030	1011	2	
370477	4870257	SPHW1-16	HWS	65.5	64.2	2.2	895	814	6	P-MTIME, LVOL&BCRGR
370478	4870298	SPHW1-18	HWS	62.7	62.6	2.0	800	794	6	P " "
370479	4870305	SPHW1-19	HWS	63.7	64.8	3.0	795	863	4	P-LVOL&BCRGR
370480	4870306	SPHW1-20	HWS	65.0	63.7	1.9	815	734	6	P-MTIME, LVOL&BCRGR
370481	4870308	SPHW1-21	HWS	61.5	60.8	1.7	845	802	8	P- " "
370482	4870330	SPHW1-23	HWS	67.6	67.4	3.7	1000	988	2	
370483	4870333	SPHW1-24	HWS	63.6	64.4	2.0	860	910	5	Q-MSCOR, MTIME&BCRGR
370484	4870334	SPHW1-25	HWS	63.3	64.0	2.2	920	963	6	Q- " "
370485	4870351	SPHW1-26	HWS	61.8	63.1	2.1	790	871	8	P-MTIME, LVOL&BCRGR

COMMENTS: Selection No. 15 is outstanding in all quality characteristics. See "Remarks" for major deficiencies of the selections not footnoted as promising in overall quality.

W.E. KRONSTAD

MADRAS, OR

NURSCO 99

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
370486	MCKAY C1017983	SPHW2-1	HRS	62.0	72.1	0.37	88.4	10.8	62.5	4M
370487	BORAH C1017267	SPHW1-2	HRS	62.0	71.8	0.34	89.7	11.6	63.4	3M
370488	WESTBRED 906R WPB00906	SPHW2-3	HRS	61.6	70.2	0.36	86.7	13.4	65.9	5H
370489	4870363	SPHW2-4	HWS	64.4	72.4	0.37	88.5	12.1	61.6	2H
370490	4870374	6/SPHW2-5	HWS	62.0	73.8	0.33	92.0	12.2	62.7	3H
370491	4870378	SPHW2-6	HWS	62.0	71.3	0.37	87.5	13.2	62.8	4H
370492	4870380	6/SPHW2-7	HWS	62.0	72.1	0.35	89.5	12.1	60.4	3H
370493	4870010	SPHW2-8	HWS	64.0	68.6	0.36	85.3	9.9	61.8	4M
370494	4870412	SPHW2-9	HWS	63.6	69.1	0.40	83.7	12.2	63.6	1H
370495	4870419	SPHW2-10	HWS	64.4	70.1	0.39	85.4	10.7	63.2	3H
370496	4870427	SPHW2-11	HWS	64.4	70.3	0.34	87.9	12.1	59.8	1H
370497	4870287	SPHW2-12	HWS	64.8	69.7	0.33	88.1	10.8	63.0	4H
370498	4870345	SPHW2-13	HWS	64.0	70.4	0.42	84.1	10.9	60.5	3M
370499	4870354	SPHW2-14	HWS	61.2	69.5	0.40	83.9	10.8	61.4	4M
370500	4870381	SPHW2-16	HWS	62.4	71.6	0.39	87.0	9.8	61.9	7M
370501	4870457	SPHW2-17	HWS	64.4	71.2	0.36	87.7	10.6	60.7	3M
370502	4870464	SPHW2-18	HWS	65.2	68.9	0.43	81.9	10.8	62.0	4M
370503	4870476	6/SPHW2-19	HWS	62.0	71.9	0.36	88.5	11.9	63.8	3H
370504	4870566	SPHW2-20	HWS	64.0	65.4	0.33	83.2	10.0	62.9	2M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality characteristics.

NURSCO 99

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
370486	MCKAY C1017983	SPHW2-1	HRS	62.5	62.7	2.5	875	887	4	
370487	BORAH C1017267	SPHW1-2	HRS	65.2	64.6	2.1	925	888	4	
370488	WESTBRED 906R WPB00906	SPHW2-3	HRS	70.0	67.6	3.9	1005	856	4	
370489	4870363	SPHW2-4	HWS	63.4	62.3	2.3	870	802	6	Q-LVOL&BCRGR
370490	4870374	SPHW2-5	HWS	64.6	63.4	2.8	940	866	3	
370491	4870378	SPHW2-6	HWS	66.7	64.5	3.2	915	779	3	Q-P-LVOL
370492	4870380	SPHW2-7	HWS	62.7	61.6	2.9	940	872	3	
370493	4870010	SPHW2-8	HWS	61.4	62.5	2.8	765	833	6	Q-FYELD, LVOL&BCRGR
370494	4870412	SPHW2-9	HWS	65.5	64.3	1.7	775	701	8	Q-FYELD P-MT, LVOL&BCR
370495	4870419	SPHW2-10	HWS	64.1	64.4	2.8	755	774	6	P-LVOL&BCRGR
370496	4870427	SPHW2-11	HWS	61.6	60.5	1.7	770	702	8	P-MTIME, LVOL&BCRGR
370497	4870287	SPHW2-12	HWS	64.5	64.7	3.3	830	842	6	Q-LVOL&BCRGR
370498	4870345	SPHW2-13	HWS	61.1	61.2	2.6	765	771	6	P-LVOL&BCRGR
370499	4870354	SPHW2-14	HWS	62.9	63.1	3.0	825	837	6	Q- " "
370500	4870381	SPHW2-16	HWS	62.4	63.6	3.5	705	779	8	P- " "
370501	4870457	SPHW2-17	HWS	62.0	62.4	2.6	770	795	4	P-LVOL
370502	4870464	SPHW2-18	HWS	63.5	63.7	2.5	825	837	4	Q-FYELD&LVOL
370503	4870476	SPHW2-19	HWS	65.4	64.5	3.2	930	874	3	
370504	4870566	SPHW2-20	HWS	62.1	63.1	1.7	785	847	4	P-FYELD&MTIME Q-LVOL

COMMENTS: The three check varieties were poorer in crumb grain than expected, so the experimental selections were judged accordingly. Most were significantly poorer in loaf volume and bread crumb grain structure. See "Remarks" for major faults. Selections #5, 7, and 19 appear distinctly better in overall quality than the HRS checks.

NURSCO 100

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC RMKS	
												1/ 3/	4/ 4/
*370505 STEPHENS													
370506 HILL 81		C1017596	SWW	60.8	73.1	0.41	88.3	9.4	54.1	2M	9.04	9.08	
370507 OR8400464P		C1017954	SWW	63.5	73.9	0.39	90.2	9.4	53.6	2M	9.25	9.29	
370508 OR8401457P		5/ 88SWRPN5	SWW	62.0	72.5	0.40	88.1	9.6	52.9	2M	9.57	9.64	
370509 OR8401098H		6/ 88SWRPN7	SWW	58.2	72.8	0.42	87.2	9.5	52.5	2M	9.21	9.27	
		5/ 88SWRPN9	SWW	61.2	73.5	0.39	90.0	10.0	52.0	2M	9.29	9.40	
370510 OR860388		6/ 88SWRPN11	SWW	63.8	71.5	0.33	91.2	8.9	52.5	2M	9.09	9.08	
370511 OR860577		6/ 88SWRPN12	SWW	61.2	73.6	0.39	89.9	8.8	54.0	2M	9.07	9.05	
370512 OR860754		88SWRPN13	SWW	63.4	71.6	0.42	85.6	10.3	52.1	2M	8.66	8.81	Q-MSCOR&CODI
370513 OR860756		88SWRPN14	SWW	59.6	69.5	0.47	79.6	11.1	52.3	3M	8.59	8.82	P-FYELD&CODI
370514 OR860763		88SWRPN15	SWW	62.0	71.4	0.40	86.6	9.1	51.9	2M	8.84	8.85	Q-CODI
370515 OR860814													
370516 OR860821		6/ 88SWRPN16	SWW	63.2	73.1	0.43	86.9	10.1	54.3	4M	9.00	9.12	P-CODI (Hard)
370517 OR860921		88SWRPN17	HWW	65.0	73.0	0.35	89.8	12.0	50.6	1H	8.30	8.54	
370518 OR860926		5/ 88SWRPN18	SWW	62.4	75.3	0.42	90.3	8.9	52.6	3L	9.16	9.15	
370519 OR861219		6/ 88SWRPN19	SWW	61.8	73.2	0.42	87.8	9.0	53.5	2M	9.10	9.10	
		6/ 88SWRPN20	SWW	64.6	73.9	0.42	88.7	8.9	53.5	2M	9.09	9.08	
370520 OR861226													
370521 OR861425		88SWRPN21	SWW	62.0	70.7	0.42	84.5	9.2	51.1	2L	9.05	9.07	Q-FYELD
370522 OR860292		6/ 88SWRPN22	SWW	64.8	71.8	0.35	90.1	9.7	52.6	2M	8.96	9.04	
370523 OR860293		6/ 88SWRPN23	SWW	62.4	71.7	0.41	86.1	9.5	51.3	2M	9.22	9.28	
370524 OR860296		88SWRPN24	SWW	62.4	70.9	0.43	84.1	10.2	52.2	2M	9.00	9.13	Q-FYELD
		6/ 88SWRPN25	SWW	63.4	71.2	0.38	87.6	9.7	52.7	2M	8.94	9.01	
370525 OR860297													
370526 OR860301		6/ 88SWRPN26	SWW	60.0	70.6	0.37	87.7	9.2	53.3	2M	9.37	9.40	Q-FYELD
370527 OR860302		6/ 88SWRPN27	SWW	63.2	72.4	0.40	88.0	9.7	50.7	1M	8.96	9.04	
370528 OR860303		6/ 88SWRPN28	SWW	63.4	71.5	0.37	88.6	9.2	51.7	1M	9.15	9.17	
370529 OR860352		6/ 88SWRPN29	SWW	63.2	71.9	0.36	89.5	8.9	52.1	1M	9.16	9.15	
		6/ 88SWRPN30	SWW	60.4	72.4	0.40	87.5	9.9	53.2	2M	8.99	9.09	
370530 OR860353													
370531 OR860385		88SWRPN31	SWW	60.4	72.6	0.40	88.3	9.3	54.1	2M	8.74	8.77	Q-CODI
370532 OR860435		6/ 88SWRPN32	SWW	63.6	72.1	0.35	90.4	9.4	53.0	2M	9.15	9.19	
370533 OR860436		6/ 88SWRPN33	SWW	61.6	74.6	0.42	89.6	9.3	50.1	2M	8.95	8.98	
370534 OR860439		6/ 88SWRPN34	SWW	65.6	72.5	0.35	91.3	9.2	55.7	3L	9.11	9.13	
		6/ 88SWRPN35	SWW	64.4	70.5	0.30	91.5	8.9	52.5	3L	9.14	9.13	
370535 OR860444													
370536 OR860452		6/ 88SWRPN36	SWW	63.2	71.4	0.36	89.1	8.3	52.2	2L	9.10	9.02	
370537 OR860553		5/ 88SWRPN37	SWW	62.0	72.6	0.38	89.4	9.3	53.6	3L	9.45	9.48	
370538 OR860571		88SWRPN38	SWW	62.4	73.1	0.42	87.7	8.9	52.5	3L	8.86	8.85	Q-CODI
370539 OR860573		6/ 88SWRPN39	SWW	59.8	71.6	0.37	89.0	8.4	53.1	2L	9.24	9.17	
		88SWRPN40	SWW	60.4	73.4	0.38	90.7	8.6	51.9	1M	8.85	8.81	Q-CODI

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 9% Protein.

*370000 is the second part of the 1987 crop.

W.E. KRONSTAD

PENDLETON, OR

NURSCO 100

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
					1/ 1/	1/ 1/	1/ 1/	1/ 1/	3/ 3/			4/ 4/	
370540	OR860575	6/88SWRPN41	SWW	60.8	73.4	0.37	90.8	8.6	53.5	1M	9.09	9.04	
370541	OR860576	6/88SWRPN42	SWW	61.0	74.1	0.37	91.9	7.9	53.2	2L	9.04	8.92	
370542	OR860581	6/88SWRPN43	SWW	59.8	72.9	0.39	88.9	8.3	52.2	2L	9.19	9.11	
370543	OR860588	6/88SWRPN44	SWW	62.8	72.6	0.40	88.4	8.3	52.8	3L	9.06	8.99	
370544	OR860589	88SWRPN45	SWW	61.6	72.7	0.39	88.8	8.7	53.4	3L	8.77	8.74	Q-CODI
370545	OR860594	5/88SWRPN46	SWW	62.0	74.1	0.42	89.0	9.2	52.6	2M	9.21	9.23	
370546	OR860595	6/88SWRPN47	SWW	64.4	72.6	0.41	87.4	9.2	53.9	3L	9.14	9.16	
370547	OR860598	6/88SWRPN48	SWW	62.2	73.6	0.39	90.1	7.9	53.2	5L	9.25	9.13	
370548	OR860627	88SWRPN49	SWW	60.2	72.5	0.41	87.3	8.1	54.4	3L	8.94	8.84	Q-CODI
370549	OR860629	6/88SWRPN50	SWW	61.6	73.9	0.42	88.6	8.7	52.9	3L	9.12	9.09	
370550	OR860632	5/88SWRPN51	SWW	60.8	75.3	0.45	88.5	9.0	52.6	3L	9.12	9.12	
370551	OR860644	5/88SWRPN52	SWW	60.8	74.2	0.43	88.4	8.4	52.2	3L	9.31	9.25	
370552	OR860645	5/88SWRPN53	SWW	61.6	74.6	0.42	89.0	8.7	53.4	3L	9.51	9.48	
370553	OR860647	6/88SWRPN54	SWW	62.0	73.0	0.42	87.2	9.5	53.1	2M	9.17	9.23	
370554	OR860674	6/88SWRPN55	SWW	60.4	73.3	0.40	89.0	9.2	53.8	3L	9.15	9.17	
370555	OR860697	88SWRPN56	SWW	64.0	72.8	0.38	89.9	8.9	54.2	3L	8.54	8.53	P-CODI
370556	OR860769	6/88SWRPN57	SWW	62.6	73.0	0.36	90.9	8.6	54.0	2L	9.19	9.14	
370557	OR860802	6/88SWRPN58	SWW	60.8	70.8	0.37	87.8	8.5	51.1	2M	9.06	9.01	Q-FYELD
370558	OR860808	6/88SWRPN59	SWW	62.6	72.8	0.34	92.2	9.3	53.8	3L	9.11	9.15	
370559	OR860813	6/88SWRPN60	SWW	60.6	72.6	0.36	90.4	8.1	52.9	4M	9.24	9.14	
370560	OR860816	6/88SWRPN61	SWW	60.2	72.2	0.35	90.5	8.2	52.8	2L	9.25	9.16	
370561	OR860827	5/88SWRPN62	SWW	58.4	73.3	0.40	88.9	9.9	54.2	6M	9.60	9.70	
370562	OR860841	6/88SWRPN63	SWW	64.6	70.6	0.35	89.0	8.9	53.6	3L	9.14	9.13	Q-FYELD
370563	OR860847	6/88SWRPN64	SWW	64.0	70.1	0.31	90.8	9.6	51.0	1M	9.34	9.40	
370564	OR860859	88SWRPN65	SWW	66.2	68.2	0.30	88.9	9.5	52.5	1M	8.99	9.04	Low FYELD
370565	OR860873	6/88SWRPN66	SWW	63.2	70.6	0.34	89.3	9.4	52.5	2M	9.14	9.18	Q-FYELD
370566	OR860897	6/88SWRPN67	SWW	62.8	73.3	0.37	91.2	9.4	52.1	2M	8.90	8.94	
370567	OR860906	6/88SWRPN68	SWW	60.0	72.1	0.33	91.6	9.1	52.0	2M	9.15	9.16	
370568	OR860909	6/88SWRPN69	SWW	63.2	73.9	0.34	93.4	8.9	52.4	2M	9.16	9.15	
370569	OR860922	6/88SWRPN70	SWW	61.4	72.3	0.35	90.7	9.6	52.4	2M	9.05	9.12	
370570	OR860924	6/88SWRPN71	SWW	61.2	73.0	0.39	88.9	9.5	52.5	2M	9.24	9.29	
370571	OR861253	88SWRPN72	SWW	59.0	68.3	0.41	82.0	9.2	51.9	2M	9.01	9.03	P-FYELD
370572	OR861257	88SWRPN73	SWW	58.8	68.5	0.41	82.2	9.0	52.1	1M	8.85	8.85	P-FYELD
370573	OR861261	88SWRPN74	SWW	58.8	67.5	0.44	79.3	9.2	52.2	2M	9.15	9.17	P-FYELD
370574	OR861289	88SWRPN75	SWW	60.2	70.6	0.42	84.5	9.3	52.5	2M	8.85	8.88	Q-FYELD&CODI

NURSCO

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH		MSCOR	FPROT	MABSC		MTYPE	CODI	CODIC		RMKS
						1/	1/			1/	3/			4/	4/	
370575	OR861292	88SWRPN76	SWW	62.6	69.2	0.37	85.9	10.9	52.1	1M			8.55	8.76	Q-FYELD&CODI	
370576	OR861298	6/88SWRPN77	SWW	59.2	72.5	0.41	87.3	9.9	54.2	4L			9.09	9.19		
370577	OR861368	88SWRPN78	SWW	61.2	71.1	0.41	85.6	8.5	51.0	2L			9.00	8.94	Q-MSCOR	
370578	OR861512	88SWRPN79	SWW	62.0	69.5	0.38	85.5	8.0	51.6	1L			9.12	9.01	P-FYELD	
370579	OR861515	88SWRPN80	SWW	62.4	70.2	0.40	84.8	9.0	50.6	1M			9.12	9.12	Q-FYELD	
370580	OR861533	88SWRPN81	SWW	63.2	69.9	0.39	85.4	9.9	52.2	1M			8.99	9.09	Q-FYELD	
370581	OR861521	6/88SWRPN82	SWW	63.4	70.5	0.37	87.4	9.3	52.3	1M			9.05	9.08	Q-FYELD	
370582	OR861539	88SWRPN83	SWW	62.8	71.3	0.40	86.4	9.0	51.1	1M			9.09	9.09	Q-FYELD	
370583	OR861559	88SWRPN84	SWW	58.0	70.0	0.43	82.9	9.4	53.7	3M			8.97	9.02	P-FYELD	
370584	OR861563	88SWRPN85	SWW	58.2	70.7	0.43	83.8	9.5	52.4	3M			8.82	8.88	P-FYELD Q-CODI	

COMMENTS: This group of samples has a large number of selections that are equal to or better in overall quality than Stenphs and Hill 81. These are identified with footnotes. See "Remarks" for questionable characteristics and/or deficiencies.

W.E. KRONSTAD

PENDLETON, OR

NURSCO 101

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/ 1/		1/ 1/	3/ 3/	
*370585	WANSER	C1013844	HRW	60.8	70.4	0.32	89.3	9.2	58.7	4M
370586	OR84400054P	88HRRPN6	HRW	60.4	66.7	0.36	83.2	7.4	60.0	3M
370587	OR8402786H	6/88HRRPN7	HRW	62.8	68.7	0.34	86.4	10.0	60.6	4M
370588	OR863545	88HRRPN8	HRW	62.4	68.3	0.32	87.0	11.0	65.6	5H
370589	OR863546	88HRRPN9	SRW	61.0	68.5	0.32	88.0	10.2	54.4	2M
370590	OR863547	88HRRPN10	HRW	60.8	68.2	0.35	85.6	10.7	60.6	4M
370591	OR863549	6/88HRRPN11	HRW	62.8	70.4	0.30	90.3	11.1	61.7	3H
370592	OR863550	88HRRPN12	HRW	59.6	65.5	0.35	82.5	10.3	60.5	6M
370593	OR860006	88HRRPN13	HRW	64.0	69.7	0.30	89.4	7.8	57.3	4L
370594	OR860007	88HRRPN14	HRW	63.8	71.9	0.34	89.7	8.1	59.3	4L
370595	OR860008	5/88HRRPN15	HRW	64.0	71.4	0.32	90.5	8.9	60.0	6M
370596	OR860009	5/88HRRPN16	HRW	64.0	70.2	0.32	88.9	9.6	59.6	4M
370597	OR860031	88HRRPN17	HRW	64.8	68.7	0.31	87.8	10.2	57.8	2M
370598	OR860032	88HRRPN18	HRW	64.4	68.8	0.31	87.9	8.9	57.3	2M
370599	OR860056	5/88HRRPN19	HRW	64.0	71.4	0.30	91.2	10.2	62.4	7M
370600	OR860058	6/88HRRPN20	HRW	65.2	70.4	0.32	88.9	9.8	63.3	7M
370601	OR860067	88HRRPN21	HRW	64.8	69.5	0.36	86.0	10.3	59.5	2M
370602	OR860077	88HRRPN22	HRW	62.2	67.3	0.31	86.6	12.1	63.0	3H
370603	OR860084	88HRRPN23	HRW	64.8	68.6	0.32	87.3	10.1	60.1	3M
370604	OR860085	88HRRPN24	HRW	65.0	67.3	0.33	85.3	9.3	61.0	3M
370605	OR860122	88HRRPN25	HRW	64.4	66.4	0.34	84.2	9.8	61.6	3L
370606	OR860123	88HRRPN26	HRW	63.6	65.8	0.32	84.2	8.9	61.1	4L
370607	OR860128	88HRRPN27	HRW	64.0	66.3	0.32	84.8	8.6	61.0	4L
370608	OR860139	88HRRPN28	HRW	65.4	68.4	0.35	85.4	9.0	59.1	2M
370609	OR860141	88HRRPN29	HRW	64.4	70.0	0.32	88.6	9.8	56.5	1M
370610	OR860163	88HRRPN30	HRW	64.6	66.3	0.33	84.6	9.2	56.8	2M
370611	OR860187	88HRRPN31	HRW	64.4	68.1	0.32	86.8	9.1	54.4	2M
370612	OR860189	88HRRPN32	SRW	62.0	68.1	0.34	86.2	9.0	52.6	1L
370613	OR860204	88HRRPN33	HRW	65.0	69.4	0.36	86.0	10.2	53.8	3M
370614	OR860207	88HRRPN34	HRW	62.6	68.5	0.33	86.6	10.4	54.7	2M
370615	OR860245	88HRRPN35	HRW	64.4	70.1	0.31	89.6	10.1	55.4	2M
370616	OR860246	88HRRPN36	HRW	63.2	69.1	0.31	88.6	10.5	53.3	2M
370617	OR860247	88HRRPN37	HRW	63.2	70.2	0.31	89.3	8.5	54.4	3L
370618	OR860248	88HRRPN38	HRW	64.4	68.4	0.32	87.1	8.0	55.8	3L
370619	OR860252	88HRRPN39	HRW	63.2	67.9	0.27	89.0	9.1	55.7	3M

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

*370000 is the second part of the 1987 crop.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 101

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
370585	WANSER	C1013844	HRW	58.1	58.9	2.8	780	835	6	
370586	OR84400054P	88HRRPN6	HRW							
370587	OR8402786H	88HRRPN7	HRW	61.3	61.3	2.5	825	825	6	Equal to Wanser Q-FYEL
370588	OR863545	88HRRPN8	HRW	67.8	66.8	4.4	810	748	4	Q-FYELD&LVOL
370589	OR863546	88HRRPN9	SRW							
370590	OR863547	88HRRPN10	HRW	61.5	60.8	2.5	825	782	6	Q-FYELD&LVOL
370591	OR863549	88HRRPN11	HRW	63.0	61.9	2.3	955	887	4	Q-MTIME
370592	OR863550	88HRRPN12	HRW	64.0	63.7	3.1	905	886	7	P-FYELD&BCRGR
370593	OR860006	88HRRPN13	HRW							
370594	OR860007	88HRRPN14	HRW							
370595	OR860008	88HRRPN15	HRW	59.6	60.7	3.1	870	938	3	
370596	OR860009	88HRRPN16	HRW	59.9	60.3	2.9	850	875	4	
370597	OR860031	88HRRPN17	HRW							
370598	OR860032	88HRRPN18	HRW	63.3	63.1	3.5	875	863	5	
370599	OR860056	88HRRPN19	HRW							
370600	OR860058	88HRRPN20	HRW	63.8	64.0	3.5	800	812	5	
370601	OR860067	88HRRPN21	HRW							
370602	OR860077	88HRRPN22	HRW	65.3	63.2	2.5	915	785	2	Q-FYELD&LVOL
370603	OR860084	88HRRPN23	HRW							
370604	OR860085	88HRRPN24	HRW							
370605	OR860122	88HRRPN25	HRW	61.6	61.8	3.1	605	617	7	P-FYELD, LVOL&BCRGR
370606	OR860123	88HRRPN26	HRW							
370607	OR860128	88HRRPN27	HRW							
370608	OR860139	88HRRPN28	HRW							
370609	OR860141	88HRRPN29	HRW							
370610	OR860163	88HRRPN30	HRW							
370611	OR860187	88HRRPN31	HRW							
370612	OR860189	88HRRPN32	SRW							
370613	OR860204	88HRRPN33	HRW							
370614	OR860207	88HRRPN34	HRW							
370615	OR860245	88HRRPN35	HRW							
370616	OR860246	88HRRPN36	HRW							
370617	OR860247	88HRRPN37	HRW							
370618	OR860248	88HRRPN38	HRW							
370619	OR860252	88HRRPN39	HRW							

HRW PRELIMINARY YIELD TRIAL

NURSCO 101

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
370620	OR860253	88HRRPN40	HRW	64.0	69.4	0.28	90.1	9.3	54.6	3M
370621	OR860254	88HRRPN41	HRW	63.2	69.4	0.32	88.1	8.0	57.7	3L
370622	OR860255	88HRRPN42	HRW	64.2	70.5	0.32	89.2	9.2	53.8	3M
370623	OR860268	88HRRPN43	HRW	63.0	69.3	0.32	88.2	10.2	54.3	3M
370624	OR860272	88HRRPN44	HRW	62.4	66.5	0.33	84.6	8.3	56.3	4L
370625	OR860273	88HRRPN45	HRW	64.2	67.5	0.31	86.8	8.1	52.6	2M
370626	OR860342	88HRRPN46	HRW	62.0	71.6	0.35	89.0	10.2	54.0	3M
370627	OR860344	88HRRPN47	HRW	64.0	69.9	0.29	90.1	11.2	60.1	3H
370628	OR860369	88HRRPN48	HRW	64.0	70.1	0.31	89.4	9.3	54.5	2M
370629	OR860407	88HRRPN49	HRW	62.8	63.8	0.35	80.8	10.1	56.0	3M
370630	OR860414	88HRRPN50	HRW	65.0	66.3	0.26	87.8	9.9	55.9	2M
370631	OR860455	88HRRPN51	HRW	61.2	69.3	0.31	88.8	10.1	58.1	6M
370632	OR860485	88HRRPN52	HRW	64.6	70.1	0.32	89.0	10.1	54.9	3L
370633	OR860503	88HRRPN53	HRW	63.8	66.1	0.37	82.0	10.0	52.3	1M
370634	OR860506	88HRRPN54	HRW	61.2	69.0	0.38	84.5	9.6	54.1	3M
370635	OR860555	88HRRPN55	HRW	65.2	67.5	0.31	86.7	10.4	54.9	2H
370636	OR860558	88HRRPN56	HRW	65.0	69.4	0.35	86.5	9.0	56.5	4M
370637	OR860562	88HRRPN57	HRW	61.8	70.5	0.36	87.1	10.6	53.6	2M
370638	OR860612	88HRRPN58	SRW	62.8	71.0	0.30	92.2	7.8	52.9	2L
370639	OR860706	88HRRPN59	HRW	61.8	69.0	0.35	86.4	9.9	57.4	4M
370640	OR860709	88HRRPN60	HRW	62.2	68.4	0.34	85.9	11.4	55.9	2H
370641	OR860711	88HRRPN61	HRW	63.4	67.8	0.33	86.1	9.7	56.4	2M
370642	OR860854	88HRRPN62	HRW	63.2	64.3	0.29	84.2	10.6	53.0	1M
370643	OR860855	88HRRPN63	HRW	65.2	68.7	0.32	87.3	10.0	54.0	2M
370644	OR860856	88HRRPN64	HRW	66.0	69.1	0.32	88.0	10.3	53.5	2M
370645	OR860862	88HRRPN65	HRW	64.0	69.0	0.34	86.6	10.0	55.9	3M
370646	OR860865	88HRRPN66	HRW	64.0	65.0	0.26	86.7	9.6	50.6	1M
370647	OR860867	88HRRPN67	HRW	66.0	68.4	0.32	87.3	8.1	54.7	2M
370648	OR860869	88HRRPN68	HRW	64.6	70.6	0.35	87.9	10.3	54.3	3M
370649	OR860875	88HRRPN69	HRW	66.2	69.7	0.36	86.1	9.0	52.7	2M
370650	OR860895	88HRRPN70	HRW	62.4	68.9	0.34	86.5	9.7	54.0	2M
370651	OR860937	88HRRPN71	HRW	63.4	70.6	0.36	87.1	9.7	54.9	2M
370652	OR861184	88HRRPN72	HRW	58.0	67.6	0.34	85.0	10.8	53.5	2M
370653	OR861201	88HRRPN73	HRW	60.8	69.1	0.38	84.7	10.2	56.1	4M
370654	OR861202	6/ 88HRRPN74	HRW	59.6	68.8	0.37	84.8	11.0	58.9	3H

NURSCO 101

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
370620	OR860253	88HRRPN40	HRW							
370621	OR860254	88HRRPN41	HRW							
370622	OR860255	88HRRPN42	HRW							
370623	OR860268	88HRRPN43	HRW							
370624	OR860272	88HRRPN44	HRW	54.8	56.5	2.9	560	665		8 P-FYELD, LVOL&BCRGR
370625	OR860273	88HRRPN45	HRW							
370626	OR860342	88HRRPN46	HRW	54.4	54.2	2.3	730	718		9 P-LVOL, BCRGR&MTIME
370627	OR860344	88HRRPN47	HRW	61.5	60.3	2.5	1015	941		1
370628	OR860369	88HRRPN48	HRW							
370629	OR860407	88HRRPN49	HRW	56.3	56.2	2.0	730	724		9 P-FYELD, MTIME, LV&BCRGR
370630	OR860414	88HRRPN50	HRW							
370631	OR860455	88HRRPN51	HRW	58.4	58.3	3.3	815	809		8 P-BCRGR
370632	OR860485	88HRRPN52	HRW							
370633	OR860503	88HRRPN53	HW							
370634	OR860506	88HRRPN54	HW							
370635	OR860555	88HRRPN55	HW	56.0	55.6	1.8	620	595		9 P-FYELD, MT, LVOL&BCRGR
370636	OR860558	88HRRPN56	HW	56.2	57.2	2.8	480	542		9 P-LVOL&BCRGR
370637	OR860562	88HRRPN57	HW							
370638	OR860612	88HRRPN58	SRW							
370639	OR860706	88HRRPN59	HRW	58.0	58.1	2.3	785	791		7 P-LVOL&BCRGR
370640	OR860709	88HRRPN60	HRW							
370641	OR860711	88HRRPN61	HRW	58.5	57.1	1.8	845	758		7 P-LVOL&BCRGR
370642	OR860854	88HRRPN62	HRW							
370643	OR860855	88HRRPN63	HRW							
370644	OR860856	88HRRPN64	HRW							
370645	OR860862	88HRRPN65	HRW	57.1	57.1	2.2	625	625		9 P-MT, LVOL&BCRGR
370646	OR860865	88HRRPN66	HRW							
370647	OR860867	88HRRPN67	HRW							
370648	OR860869	88HRRPN68	HRW	55.8	55.5	2.1	740	721		6 P-" " "
370649	OR860875	88HRRPN69	HRW							
370650	OR860895	88HRRPN70	HRW							
370651	OR860937	88HRRPN71	HRW							
370652	OR861184	88HRRPN72	HRW							
370653	OR861201	88HRRPN73	HRW	57.5	57.3	2.2	810	798		7 P-MT, LVOL&BCRGR
370654	OR861202	88HRRPN74	HRW	61.1	60.1	2.5	930	868		2

NURSCO 101

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
370655	OR861203	688HRRPN75	HRW	60.0	69.2	0.36	85.9	11.0	58.7	3H
370656	OR861437	88HRRPN76	HRW	61.8	69.6	0.31	88.6	12.0	54.1	1M
370657	OR861555	88HRRPN77	HRW	60.4	65.3	0.36	82.0	8.9	58.1	6L
370658	OR860108	88HRRPN78	HW	59.6	66.5	0.37	82.7	8.9	61.0	4L

NURSCO 101

PENDLETON, OR

W.E. KRONSTAD

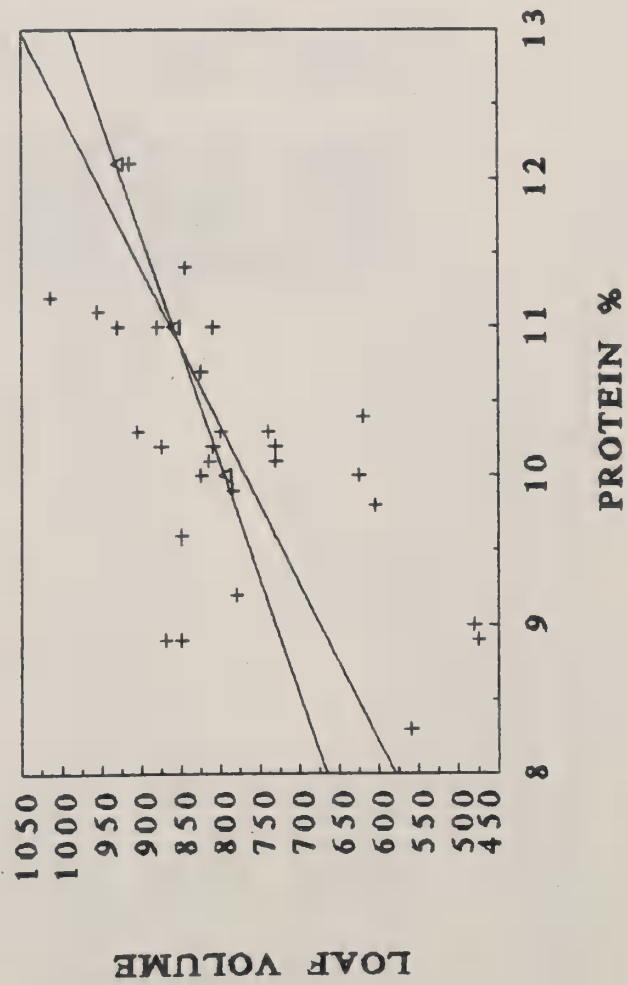
LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
370655	OR861203	88HRRPN75	HRW	60.9	59.9	2.4	880	818	4	Equal to Wanser
370656	OR861437	88HRRPN76	HRW							6 P-FYELD
370657	OR861555	88HRRPN77	HRW	57.7	58.8	3.4	850	918		8 P-FYELD, LVOL&BCRGR
370658	OR860108	88HRRPN78	HRW	60.1	61.2	2.8	475	543		

COMMENTS: The selections with no baking data were not tested for baking quality because of extremely weak dough mixing properties. Wanser was abnormally poor in crumb grain, however above normal in loaf volume. Several of the selections were above the expected volume for their protein content (see accompanied plot). Some are significantly better than Wanser and are footnoted.

LOAF VOLUME VS PROTEIN

HRW Preliminary Yield Trial

+ LOAF VOLUME Δ EXPECTED



USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

HWY PRELIMINARY YIELD TRIAL

NURSCO 102

PENDLETON, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
*370659 WANSER		C1013844	HRW	61.2	70.8	0.33	89.0	9.3	58.0	4M
370660 CENTURA			HRW	62.6	69.2	0.32	87.9	11.4	61.8	3H
370661 OR8400115H		88HWRPN9	HRW	57.4	68.7	0.41	82.4	8.5	58.0	3M
370662 OR8401159S		88HWRPN11	HRW	61.2	71.6	0.35	88.9	9.2	56.7	2M
370663 OR8402964H		88HWRPN18	HRW	60.8	71.2	0.33	89.3	10.6	58.6	2M
370664 OR8403671H		88HWRPN19	HRW	60.8	69.6	0.36	86.1	10.3	56.9	2M
370665 OR8403939H		88HWRPN20	HRW	62.2	70.2	0.31	89.7	10.7	56.7	2M
370666 OR860004		88HWRPN21	HRW	65.2	67.1	0.32	85.5	8.1	62.3	6L
370667 OR860049		6/ 88HWRPN22	HRW	65.2	71.9	0.32	90.8	10.1	59.1	4M
370668 OR860068		88HWRPN23	HRW	61.2	70.5	0.37	86.6	11.4	55.9	1H
370669 OR860095		88HWRPN24	HRW	62.0	69.8	0.36	86.7	11.2	58.5	3H
370670 OR860098		88HWRPN25	HRW	61.8	68.3	0.35	85.6	10.4	60.4	7M
370671 OR860102		88HWRPN26	HRW	61.6	69.2	0.35	86.5	10.2	59.7	4M
370672 OR860107		88HWRPN27	HRW	60.4	66.9	0.37	83.0	11.4	61.9	7M
370673 OR860109		88HWRPN28	HRW	61.6	66.0	0.35	83.0	10.2	60.8	6M
370674 OR860112		88HWRPN29	HRW	62.8	67.6	0.37	83.7	9.2	58.3	3M
370675 OR860113		88HWRPN30	HRW	61.6	69.4	0.38	85.0	9.0	58.0	2M
370676 OR860115		88HWRPN31	HRW	63.6	67.0	0.35	83.9	8.8	58.1	2M
370677 OR860116		88HWRPN32	HRW	62.8	67.0	0.34	84.4	8.4	62.3	4L
370678 OR860124		88HWRPN33	HRW	62.4	66.5	0.35	83.5	7.9	62.1	4L
370679 OR860125		88HWRPN34	HRW	61.0	67.1	0.37	83.2	8.9	61.8	4L
370680 OR860126		88HWRPN35	HRW	63.0	68.4	0.36	85.2	8.9	60.4	3L
370681 OR860127		88HWRPN36	HRW	64.8	68.9	0.37	85.2	8.6	60.6	3L
370682 OR860154		6/ 88HWRPN37	HRW	60.0	69.2	0.38	84.7	9.3	60.0	6L
370683 OR860172		88HWRPN38	HRW	62.4	67.1	0.31	86.1	9.2	60.0	3M
370684 OR860173		88HWRPN39	HRW	62.8	63.8	0.37	79.9	9.8	61.0	2M
370685 OR860188		88HWRPN40	HRW	65.0	68.0	0.34	85.8	9.4	56.9	2M
370686 OR860219		88HWRPN41	HRW	63.2	65.2	0.36	81.5	9.5	60.9	3M
370687 OR860341		88HWRPN42	HRW	63.2	70.4	0.37	86.3	9.2	59.2	3M
370688 OR860401		88HWRPN43	HRW	65.0	68.4	0.30	88.0	10.4	58.4	3M
370689 OR860445		6/ 88HWRPN44	HRW	63.8	70.0	0.36	86.5	9.3	60.8	4M
370690 OR860471		88HWRPN45	HRW	62.4	69.8	0.36	86.6	8.8	61.5	3M
370691 OR860472		88HWRPN46	HRW	62.2	70.0	0.38	85.4	9.2	60.5	3M
370692 OR860583		88HWRPN47	HRW	58.4	68.5	0.40	82.9	10.3	60.7	7M
370693 OR860609		88HWRPN48	HRW	63.4	70.3	0.36	87.2	10.1	58.6	2M

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein.

*370000 is the second part of the 1987 crop.

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
370659	WANSER	C1013844	HRW	58.5	59.2	3.1	800	848	6	
370660	CENTURA		HRW	64.4	63.0	3.0	880	793	4	
370661	OR8400115H	88HWRPN9	HW							
370662	OR8401159S	88HWRPN11	HW							
370663	OR8402964H	88HWRPN18	HW	59.9	59.3	1.8	715	678	8	P-MT, LVOL&BCRGR
370664	OR8403671H	88HWRPN19	HW							
370665	OR8403939H	88HWRPN20	HW							
370666	OR860004	88HWRPN21	HW	61.1	63.0	4.2	660	778	6	P-FYELD&LVOL
370667	OR860049	88HWRPN22	HW	59.9	59.8	2.5	815	809	6	
370668	OR860068	88HWRPN23	HW							
370669	OR860095	88HWRPN24	HW	60.4	59.2	3.0	740	666	6	P-LVOL, Q-BCRGR
370670	OR860098	88HWRPN25	HW	61.5	61.1	2.9	755	730	7	P- " Q- "
370671	OR860102	88HWRPN26	HW	60.6	60.4	2.1	780	768	7	P- " Q- "
370672	OR860107	88HWRPN27	HW	64.5	63.1	3.1	725	638	6	P- " Q- "
370673	OR860109	88HWRPN28	HW	62.2	62.0	3.5	560	548	8	P-FYELD, LVOL&BCRGR
370674	OR860112	88HWRPN29	HW							
370675	OR860113	88HWRPN30	HW							
370676	OR860115	88HWRPN31	HW							
370677	OR860116	88HWRPN32	HW	61.9	63.5	2.9	480	579	8	P-FYELD, LVOL&BCRGR
370678	OR860124	88HWRPN33	HW							
370679	OR860125	88HWRPN34	HW	61.9	63.0	3.4	610	678	8	P-FYELD, LVOL&BCRGR
370680	OR860126	88HWRPN35	HW							
370681	OR860127	88HWRPN36	HW							
370682	OR860154	88HWRPN37	HW	60.5	61.2	3.4	820	863	4	
370683	OR860172	88HWRPN38	HW							
370684	OR860173	88HWRPN39	HW							
370685	OR860188	88HWRPN40	HW							
370686	OR860219	88HWRPN41	HW							
370687	OR860341	88HWRPN42	HW							
370688	OR860401	88HWRPN43	HW							
370689	OR860445	88HWRPN44	HW	61.8	62.5	2.5	795	838	6	
370690	OR860471	88HWRPN45	HW							
370691	OR860472	88HWRPN46	HW							
370692	OR860583	88HWRPN47	HW	62.2	61.9	3.5	755	736	6	Q-FYELD&LVOL
370693	OR860609	88HWRPN48	HW							

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

HWW PRELIMINARY YIELD TRIAL

W.E. KRONSTAD

PENDLETON, OR

NURSCO 102

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/		1/	3/	
370694	OR860667	88HWRPN49	HWW	60.4	68.0	0.29	88.5	9.1	58.7	2M
370695	OR860698	88HWRPN50	HWW	63.6	69.7	0.32	88.4	8.8	59.7	6L
370696	OR860701	88HWRPN51	HWW	62.2	70.5	0.33	88.6	8.6	58.9	6L
370697	OR860757	88HWRPN52	HWW	61.2	69.1	0.36	85.6	9.6	59.8	3M
370698	OR860759	88HWRPN53	HWW	62.6	70.2	0.35	87.7	8.2	60.1	2M
370699	OR860764	88HWRPN54	HWW	60.4	70.2	0.36	86.8	9.5	58.5	2M
370700	OR860765	88HWRPN55	HWW	60.4	69.4	0.35	86.5	8.3	59.4	3L
370701	OR860791	88HWRPN56	HWW	63.4	69.4	0.37	85.6	9.7	58.3	2M
370702	OR860792	88HWRPN57	HWW	62.2	70.5	0.36	87.1	9.2	60.0	2M
370703	OR860794	88HWRPN58	HWW	62.0	71.4	0.35	88.5	9.8	58.4	3M
370704	OR860846	88HWRPN59	HWW	64.6	68.9	0.32	87.5	10.8	58.6	2M
370705	OR860848	88HWRPN60	HWW	64.4	70.0	0.34	87.7	10.2	57.5	2M
370706	OR860849	88HWRPN61	HWW	65.2	67.6	0.30	87.4	10.7	57.7	2M
370707	OR860851	88HWRPN62	HWW	64.4	68.7	0.30	88.5	10.1	58.4	2M
370708	OR861227	88HWRPN63	HWW	62.6	70.3	0.37	86.7	8.7	61.8	4L
370709	OR861476	88HWRPN64	HWW	62.0	68.9	0.37	84.7	9.3	59.0	2M
370710	OR861503	88HWRPN65	HWW	62.8	70.8	0.33	88.9	8.6	58.1	2M
370711	OR861578	88HWRPN66	HWW	65.2	68.8	0.33	87.0	9.0	58.3	3M
370712	OR861599	6/ 88HWRPN67	HWW	64.4	69.1	0.34	86.7	9.1	60.6	6L

NURSCO 102

PENDELTON, OR

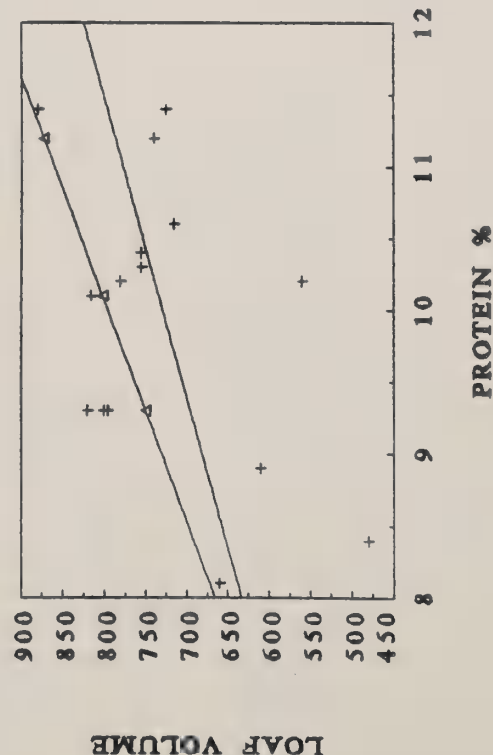
W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
370694	OR860667	88HWRPN49	HW							
370695	OR860698	88HWRPN50	HW							
370696	OR860701	88HWRPN51	HW							
370697	OR860757	88HWRPN52	HW							
370698	OR860759	88HWRPN53	HW							
370699	OR860764	88HWRPN54	HW							
370700	OR860765	88HWRPN55	HW							
370701	OR860791	88HWRPN56	HW							
370702	OR860792	88HWRPN57	HW							
370703	OR860794	88HWRPN58	HW							
370704	OR860846	88HWRPN59	HW							
370705	OR860848	88HWRPN60	HW							
370706	OR860849	88HWRPN61	HW							
370707	OR860851	88HWRPN62	HW							
370708	OR861227	88HWRPN63	HW	61.7	63.0	3.6	650	731		8 P-LVOL&BCRGR
370709	OR861476	88HWRPN64	HW							
370710	OR861503	88HWRPN65	HW							
370711	OR861578	88HWRPN66	HW							
370712	OR861599	88HWRPN67	HW	60.9	61.8	4.1	750	806		6

LOAF VOLUME VS PROTEIN

HW Preliminary Yield Trial

+ LOAF VOLUME Δ EXPECTED



COMMENTS: Only a few of these hard white selections appear good in both milling and baking quality. Many of the selections that were not baked because of weak dough mixing properties. The check varieties were abnormal in bread crumb structure, so the experimental lines were judged accordingly.

NURSCO 103

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
* 370713	MCKAY C1017983	SPHRA1	HRS	61.0	69.9	0.39	85.0	12.1	67.8	4H
370714	BORAH C1017267	SPHRA2	HRS	59.2	70.0	0.35	87.2	13.3	66.7	4H
370715	WESTBRED 906R WPB00906	SPHRA3	HRS	58.8	67.4	0.36	83.7	14.5	68.3	6H
370716	4870027	6/SPHRA5	HRS	60.4	67.8	0.36	84.2	12.5	65.7	5H
370717	4870456	5/SPHRA8	HRS	64.4	70.6	0.39	85.9	10.7	67.8	4H
370718	4870462	6/SPHRA11	HRS	63.2	68.9	0.38	84.5	12.4	67.4	4H
370719	4870475	5/SPHRA12	HRS	60.4	69.6	0.33	87.9	12.3	67.4	4H
370720	4870260	SPHRA15	HRS	62.0	64.9	0.33	82.8	12.5	64.2	3H
370721	4870410	5/SPHRA21	HRS	61.2	70.3	0.36	87.0	12.3	67.5	3H
370722	4870469	SPHRA24	HRS	63.2	66.6	0.35	83.7	11.6	66.8	4H
370723	4870226	SPHRA25	HRS	62.0	64.7	0.36	81.2	12.7	63.1	3H
370724	4870259	SPHRA26	HRS	63.2	64.9	0.37	80.6	11.9	63.8	2H
370725	4870355	6/SPHRA28	HRS	64.0	68.3	0.37	84.2	12.4	67.4	3H
370726	4870367	SPHRA29	HRS	60.8	66.7	0.42	80.0	11.6	64.6	3H
370727	4870439	SPHRA31	HRS	61.4	66.7	0.44	79.0	10.1	63.4	2H
370728	4870008	SPHRA32	HRS	61.8	67.6	0.37	83.5	12.1	63.1	2H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

*370000 is the second part of the 1987 crop.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 103

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
370713	MCKAY C1017983	SPHRA1	HRS	68.6	68.5	5.1	1000	994	1	
370714	BORAH C1017267	SPHRA2	HRS	68.7	67.4	3.3	1055	974	2	
370715	WESTBRED 906R WPB00906	SPHRA3	HRS	71.5	69.0	5.4	1120	965	2	Q-FYELD
370716	4870027	SPHRA5	HRS	66.9	66.4	3.8	1010	979	2	
370717	4870456	SPHRA8	HRS	67.2	68.5	4.2	975	1056	1	
370718	4870462	SPHRA11	HRS	68.5	68.1	3.6	995	970	3	Q-BCRGR
370719	4870475	SPHRA12	HRS	68.4	68.1	3.7	1045	1026	2	
370720	4870260	SPHRA15	HRS	65.4	64.9	2.5	930	899	3	P-FYELD&LVOL
370721	4870410	SPHRA21	HRS	68.5	68.2	4.3	1020	1001	2	
370722	4870469	SPHRA24	HRS	67.1	67.5	3.4	935	960	2	P-FYELD
370723	4870226	SPHRA25	HRS	64.0	63.3	2.5	850	807	6	P-FYELD, LVOL&BCRGR
370724	4870259	SPHRA26	HRS	63.9	64.0	1.9	850	856	6	P- " " &MT
370725	4870355	SPHRA28	HRS	68.0	67.6	2.8	1000	975	2	
370726	4870367	SPHRA29	HRS	64.4	64.8	2.5	895	920	6	P-FYELD, LVOL, BCRGR
370727	4870439	SPHRA31	HRS	61.7	63.6	2.1	745	863	8	P- " " &MT
370728	4870008	SPHRA32	HRS	63.4	63.3	1.4	800	794	8	P- " " " "

COMMENTS: Several of the selections footnoted as promising are equal or better in overall quality than the check varieties. Others have poor flour yields and/or baking properties (See "Remarks").

USDA, SEA AR
WESTERN WHEAT
PULLMAN, WA.

HWS ADVANCED YIELD TRIAL

W.E. KRONSTAD

MADRAS, OR

NURSCO 104

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 2/	MTYPE
*370729	MCKAY C1017983	SPSWA1	HRS	58.8	69.1	0.35	86.1	13.9	68.1	6H
370730	SHASTA	SPSWA2	HRS	69.4	69.8	0.34	87.6	13.2	67.0	3H
370731	BORAH C1017267	SPSWA3	HRS	61.2	68.5	0.37	84.5	13.3	67.7	5H
370732	1201	6/SPSWA6	HWS	62.8	68.4	0.37	84.6	11.4	67.1	4H
370733	4870452	6/SPSWA7	HWS	60.4	68.0	0.37	83.9	12.3	64.2	3H
370734	4870235	6/SPSWA9	HWS	64.0	68.9	0.37	84.8	12.4	67.1	4H
370735	4870249	SPSWA11	HWS	62.6	67.2	0.35	84.1	13.2	63.5	3H
370736	4870279	6/SPSWA12	HWS	62.6	69.4	0.37	85.4	12.5	66.5	5H
370737	4870332	SPSWA16	HWS	61.0	68.0	0.41	82.2	12.5	66.5	3H
370738	4870347	SPSWA18	HWS	62.8	66.8	0.34	84.5	12.9	63.0	3H
370739	4870365	SPSWA20	HWS	65.0	69.5	0.33	87.6	11.8	63.5	2H
370740	4870373	SPSWA22	HWS	64.8	67.9	0.38	83.5	11.6	63.4	3H
370741	4870426	SPSWA25	HWS	63.6	67.7	0.37	83.9	11.5	62.4	2H
370742	4870366	SPSWA27	HWS	63.6	68.5	0.46	80.0	10.7	63.2	2H
370743	4870436	SPSWA28	HWS	64.0	68.3	0.34	85.8	10.4	65.0	2H
370744	4870450	SPSWA29	HWS	64.4	66.9	0.36	83.7	9.8	64.2	3H
370745	4870468	SPSWA30	HWS	63.2	68.9	0.37	85.0	10.9	66.3	6H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

*370000 is the second part of the 1987 crop.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 104

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
370729	MCKAY C1017983	SPSWA1	HRS	69.7	67.8	8.0	1034	916	2	
370730	SHASTA	SPSWA2	HRS	68.9	67.7	3.3	1055	981	2	
370731	BORAH C1017267	SPSWA3	HRS	69.7	68.4	4.1	1025	944	4	
370732	1201	SPSWA6	HWS	67.2	67.8	3.3	955	992	4 Q-BCRGR, = to Borah	
370733	4870452	SPSWA7	HWS	64.7	64.4	3.0	935	916	2 Q-FYELD	
370734	4870235	SPSWA9	HWS	67.7	67.3	3.4	950	925	2	
370735	4870249	SPSWA11	HWS	64.9	63.7	2.5	920	846	4 Q-FYELD, P-LVOL	
370736	4870279	SPSWA12	HWS	67.2	66.7	3.6	1030	999	4 = to Borah	
370737	4870332	SPSWA16	HWS	67.2	66.7	2.4	955	924	4 Q-FYELD&MT	
370738	4870347	SPSWA18	HWS	64.1	63.2	2.5	905	849	4 P-FYELD&LVOL	
370739	4870365	SPSWA20	HWS	63.5	63.7	2.2	815	827	8 P-MT, LVOL&BCRGR	
370740	4870373	SPSWA22	HWS	63.2	63.6	2.8	810	835	8 P-FYELD, LVOL&BCRGR	
370741	4870426	SPSWA25	HWS	62.1	62.6	2.2	800	831	9 P- " " &MT	
370742	4870366	SPSWA27	HWS	62.1	63.4	2.1	770	851	9 P-MT, LVOL&BCRGR	
370743	4870436	SPSWA28	HWS	64.1	65.7	2.1	820	919	7 P-BCRGR	
370744	4870450	SPSWA29	HWS	62.7	64.9	2.4	830	966	7 P-FYELD&BCRGR	
370745	4870468	SPSWA30	HWS	65.9	67.0	6.2	790	858	4 P-LVOL&BCRGR	

COMMENTS: Several of these hard white wheats were low in flour yield. Most were also questionable to poor in baking qualities. The better selections are footnoted as "promising".

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

HRS ELITE YIELD TRIAL

W.E. KRONSTAD

MADRAS, OR

NURSCO 105

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
*370746	MCKAY C1017983	SPHRE1	HRS	63.5	71.8	0.40	84.5	11.4	65.2	3H
370747	BORAH C1017267	SPHRE2	HRS	63.5	71.2	0.39	83.5	12.0	65.5	2H
370748	4870583	6/ SPHRE3	HRS	63.0	72.6	0.45	82.4	13.9	68.8	3H
370749	4870582	6/ SPHRE4	HRS	60.0	72.3	0.42	83.4	11.6	67.5	4H
370750	4870544	SPHRE5	HRS	63.0	69.3	0.44	78.2	12.6	68.2	5H
370751	4870581	6/ SPRHE6	HRS	63.6	71.7	0.46	80.2	12.5	69.1	5H
370752	4850008	SPHRE7	HRS	63.3	68.5	0.45	76.2	11.9	67.8	3H
370753	4850009	SPHRE8	HRS	63.7	68.3	0.47	74.6	11.5	65.7	2H
370754	4850010	6/ SPHRE9	HRS	63.8	71.0	0.47	78.8	11.2	67.5	4H
370755	4850011	SPHRE10	HRS	63.6	67.1	0.47	74.2	11.6	65.0	2H
370756	4850012	SPHRE11	HRS	65.2	69.5	0.46	77.1	11.0	64.6	2H
370757	4850018	SPHRE12	HRS	64.2	67.7	0.48	73.0	11.4	64.3	2H
370758	4850015	6/ SPHRE13	HRS	65.7	68.3	0.43	76.9	12.2	69.5	4H
370759	4840018	SPHRE14	HRS	64.7	67.6	0.42	77.4	12.1	67.9	4H
370760	4840022	SPHRE15	HRS	64.4	67.3	0.41	77.4	11.9	69.1	3H
370761	4840013	SPHRE16	HWS	64.0	70.1	0.40	82.6	10.5	67.6	3H
370762	4840016	SPHRE17	HWS	63.6	68.8	0.43	76.5	10.9	68.7	3H
370763	4870005	SPHRE18	HRS	64.2	69.9	0.38	82.2	11.8	68.9	5H
370764	4870006	SPHRE19	HRS	64.5	71.0	0.40	83.1	12.5	68.0	4H
370765	4870007	SPHRE20	HRS	64.7	70.6	0.38	84.1	11.1	67.5	4H
370766	4870009	SPHRE21	HRS	64.9	69.4	0.47	74.8	13.3	68.5	3H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 12% Protein.

4/ Observed Values Corrected to 12% Protein.

*370000 is the second part of the 1987 crop.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 105

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
370746	MCKAY C1017983	SPHRE1	HRS	66.3	66.9	3.1	955	992	2	
370747	BORAH C1017267	SPHRE2	HRS	67.2	67.2	2.1	960	960	4	
370748	4870583	SPHRE3	HRS	72.4	70.5	2.5	1080	962	2 Q-FASH	
370749	4870582	SPHRE4	HRS	68.8	69.2	4.3	995	1020	3	
370750	4870544	SPHRE5	HRS	70.5	69.9	3.6	950	913	4 Q-FYELD, LVOL&BCRGR	
370751	4870581	SPHRE6	HRS	70.3	69.8	4.1	980	949	2 Q-FASH	
370752	4850008	SPHRE7	HRS	69.4	69.5	3.2	985	991	4 P-FYELD Q-BCRGR	
370753	4850009	SPHRE8	HRS	65.9	66.4	1.9	800	831	9 P-FYELD, MT, LVOL&BCRGR	
370754	4850010	SPHRE9	HRS	68.4	69.2	3.3	865	915	3 Q-FASH&LVOL	
370755	4850011	SPHRE10	HRS	66.3	66.7	2.0	770	795	9 P-FYELD, MT, LVOL&BCRGR	
370756	4850012	SPHRE11	HRS	65.3	66.3	2.4	760	822	9 P-MT, LVOL&BCRGR	
370757	4850018	SPHRE12	HRS	64.4	65.0	1.7	765	802	9 P-FYELD, MT, LVOL&BCRGR	
370758	4850015	SPHRE13	HRS	71.4	71.2	3.7	945	933	2 Q-FYELD	
370759	4840018	SPHRE14	HRS	69.7	69.6	3.3	875	869	5 P-FYELD, LVOL&BCRGR	
370760	4840022	SPHRE15	HRS	70.7	70.8	2.8	890	896	4 P- " "	
370761	4840013	SPHRE16	HWS	67.8	69.3	2.9	770	863	9 P-LVOL&BCRGR	
370762	4840016	SPHRE17	HWS	69.3	70.4	2.9	905	973	4 Q-FYELD&BCRGR	
370763	4870005	SPHRE18	HRS	70.4	70.6	4.2	915	927	4 Q- "	
370764	4870006	SPHRE19	HRS	70.2	69.7	3.5	900	869	5 Q-LVOL&BCRGR	
370765	4870007	SPHRE20	HRS	68.3	69.2	3.9	820	876	6 Q- "	
370766	4870009	SPHRE21	HRS	71.5	70.2	2.8	945	864	5 Q-LVOL&BCRGR	

COMMENTS: Several of these selections had questionable or poor flour yields and/or bread baking characteristics. Others that are footnoted as promising are marginal and should be advanced with some cautious consideration. Protein levels and test weights were good, so these results should be meaningful.

W.E. KRONSTAD

PENDLETON, OR

NURSCO 106

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/ 1/		1/ 1/	3/ 3/	
*370767	MCKAY C1017983	SPHRE1	HRS	60.2	71.8	0.42	84.4	12.2	66.1	4H
370768	BORAH C1017267	SPHRE2	HRS	60.0	71.9	0.40	83.8	12.7	65.4	3H
370769	BRONZE CHIEF GP860001	SPHRE3	HRS	60.1	73.5	0.43	84.6	13.8	70.1	6H
370770	KODIAK GP860002	SPHRE4	HRS	55.8	72.0	0.42	83.8	13.2	68.9	7H
370771	WESTBRED 906R WPB00906	SPHRE5	HRS	61.6	71.4	0.43	81.3	13.7	68.2	5H
370772	YECORA ROJO C1017414	SPHRE6	HRS	60.2	71.7	0.40	83.2	13.6	69.7	7H
370773	4850008	6/SPHRE7	HRS	60.4	70.0	0.41	80.9	12.6	68.6	5H
370774	4850009	SPHRE8	HRS	60.1	69.0	0.42	78.7	13.0	65.8	4H
370775	4850010	6/SPHRE9	HRS	60.2	70.9	0.40	82.7	12.8	69.0	5H
370776	4850011	SPHRE10	HRS	60.4	68.2	0.40	77.7	12.8	66.1	3H
370777	4850012	SPHRE11	HRS	62.3	69.9	0.39	80.7	11.9	64.8	3H
370778	4850018	SPHRE12	HRS	60.1	67.7	0.42	77.4	12.3	65.1	3H
370779	4840015	6/SPHRE13	HRS	60.1	68.1	0.43	77.2	13.7	66.7	5H
370780	4840018	6/SPHRE14	HRS	59.1	68.6	0.42	78.1	13.6	67.5	6H
370781	4840022	6/SPHRE15	HRS	58.3	68.5	0.43	77.5	13.9	70.0	4H
370782	4840013	6/SPHRE16	HRS	56.5	70.8	0.46	78.9	13.7	70.4	6H
370783	4840016	6/SPHRE17	HRS	57.0	68.2	0.48	76.2	14.0	70.7	7H
370784	4870005	6/SPHRE18	HRS	61.5	71.3	0.44	80.9	13.4	71.6	6H
370785	4870006	6/SPHRE19	HRS	61.4	70.8	0.43	80.8	13.6	69.7	6H
370786	4870007	6/SPHRE20	HRS	61.4	70.4	0.46	80.1	13.0	68.8	6H
370787	4870009	SPHRE21	HRS	61.7	68.9	0.50	73.9	14.7	70.3	6H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 13% Protein.

4/ Observed Values Corrected to 13% Protein.

*370000 is the second part of the 1987 crop.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

HRS ELITE YIELD TRIAL

W.E. KRONSTAD

PENDLETON, OR

NURSCO 106

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
370767	MCKAY C1017983	SPHRE1	HRS	67.0	67.8	3.3	1055	1105	2	
370768	BORAH C1017267	SPHRE2	HRS	66.8	67.1	2.9	1040	1059	2	
370769	BRONZE CHIEF GP860001	SPHRE3	HRS	71.1	70.3	6.8	1065	1015	3	
370770	KODIAK GP860002	SPHRE4	HRS	69.8	69.6	9.5	1090	1078	3	
370771	WESTBRED 906R WPB00906	SPHRE5	HRS	70.6	69.9	5.2	1035	992	4	
370772	YECORA ROJO C1017414	SPHRE6	HRS	70.5	69.9	6.7	1085	1048	2	2 Q-FYELD
370773	4850008	SPHRE7	HRS	68.4	68.8	4.4	1030	1055	4	Q-FYELD, LVOL&BCRGR
370774	4850009	SPHRE8	HRS	65.5	65.5	3.5	960	960	2	
370775	4850010	SPHRE9	HRS	69.5	69.7	4.0	1060	1072	2	
370776	4850011	SPHRE10	HRS	66.6	66.8	3.0	980	992	3	Q-FYELD
370777	4850012	SPHRE11	HRS	64.4	65.5	3.3	920	988	4	Q-FYELD&BCRGR
370778	4850018	SPHRE12	HRS	65.1	65.8	3.0	890	933	4	Q-FYELD, LVOL&BCRGR
370779	4840015	SPHRE13	HRS	67.6	66.9	4.5	1040	997	2	Q-
370780	4840018	SPHRE14	HRS	68.3	67.7	4.8	1060	1023	2	Q-
370781	4840022	SPHRE15	HRS	70.6	69.7	4.3	1040	984	2	Q-
370782	4840013	SPHRE16	HRS	71.3	70.6	6.4	1035	992	2	Q-FASH
370783	4840016	SPHRE17	HRS	71.9	70.9	8.6	1100	1038	1	Long Mixing? Q-FASH
370784	4870005	SPHRE18	HRS	72.2	71.8	7.7	980	955	2	"
370785	4870006	SPHRE19	HRS	69.5	68.9	6.2	1020	983	1	
370786	4870007	SPHRE20	HRS	69.0	69.0	5.7	1010	1010	3	
370787	4870009	SPHRE21	HRS	72.2	70.5	6.2	1040	935	2	P-MSCOR

COMMENTS: Special notice should be given to selections #13-20. They generally have good baking qualities, but are low in flour yields and higher in flour ash which resulted in low milling scores.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

SWS ELITE YIELD TRIAL

W.E. KRONSTAD

MADRAS, OR

NURSCO 107

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS	BABSC
						1/		1/	3/			3/
*370788	OWENS C1017904	SPSWE1	SWS	63.7	68.2	0.39	78.6	10.0	57.5	3M		
370789	TWIN C1014588	SPSWE2	SWS	61.1	68.8	0.46	75.2	9.9	57.4	2M		
370790	DIRKWIN C1017745	SPSWE3	SWS	61.1	69.4	0.44	76.7	9.9	56.1	2M		
370791	4850005	SPSWE4	SWS	62.7	69.0	0.38	79.3	10.6	57.5	2M		
370792	4850001	6/SPSWE5	SWS	65.0	70.9	0.34	85.3	9.9	57.2	2M		
370793	4850006	6/SPSWE6	SWS	62.6	69.5	0.42	78.2	11.4	61.9	3H	61.5	61.1
370794	4850007	SPSWE7	SWS	62.0	70.3	0.43	78.0	10.6	61.2	6M	60.5	60.9
370795	4840027	6/SPSWE8	SWS	62.2	69.2	0.43	74.7	12.0	61.2	4H	62.9	61.9
370796	4870455	SPSWE9	SWS	62.0	66.2	0.45	70.1	10.7	60.6	3M		
370797	4870503	SPSWE10	SWS	61.4	68.4	0.46	72.1	10.4	57.3	3M		
370798	4870570	SPSWE11	SWS	61.4	70.7	0.46	75.3	10.2	58.9	3M	58.3	59.1
370799	4870572	SPSWE12	SWS	65.0	67.8	0.39	75.5	11.1	59.2	4M	59.5	59.4
370800	4870269	SPSWE13	SWS	63.6	63.5	0.39	69.2	11.2	59.4	4M	59.8	59.6
370801	4870316	SPSWE14	SWS	62.2	67.1	0.43	71.2	9.7	58.2	3M		
370802	4870442	6/SPSWE15	SWS	61.4	68.3	0.42	75.0	9.5	57.4	3M		
370803	4870438	SPSWE16	SWS	61.2	66.2	0.44	72.1	10.4	60.4	3M		
370804	4870463	SPSWE17	SWS	64.0	66.1	0.38	75.3	11.6	59.2	1H		

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 11% Protein.

*370000 is the second part of the 1987 crop.

USDA, SEA AR
WESTERN WHEAT
PULLMAN, WA.

NURSCO 107

SWS ELITE YIELD TRIAL

MADRAS, OR

W.E. KRONSTAD

LABNUM	VARIETY	IDNO	CLASS	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	CAVOL	SCSOR	REMARKS
370788	OWENS C1017904	SPSWE1	SWS					8.94	8.83	1240	72.0	
370789	TWIN C1014588	SPSWE2	SWS					8.99	8.87	1165	63.0	
370790	DIRKWIN C1017745	SPSWE3	SWS					8.46	8.34	1195	66.0	
370791	4850005	SPSWE4	SWS					8.56	8.52	1145	63.0	Q-CODI&SCSOR
370792	4850001	SPSWE5	SWS					8.70	8.58	1195	65.0	Q-CODI
370793	4850006	SPSWE6	SWS	2.8	950	926	3	8.36	8.41	1100	56.0	Hard-Poor SWS
370794	4850007	SPSWE7	SWS	3.7	900	924	4	8.75	8.71	1150	64.0	Q-BCRGR Q-Dual P.
370795	4840027	SPSWE8	SWS	3.9	960	900	3	8.45	8.56	1130	63.0	Hard-Poor SWS
370796	4870455	SPSWE9	SWS					8.49	8.45	1170	66.0	P-CODI
370797	4870503	SPSWE10	SWS					8.59	8.52	1180	65.0	P-CODI
370798	4870570	SPSWE11	SWS	3.0	880	928	6	8.60	8.51	1195	67.0	P-BCRGR, CODI
370799	4870572	SPSWE12	SWS	2.5	950	944	4	8.57	8.59	1125	61.0	Hard Q-BCRGR P-SWS
370800	4870269	SPSWE13	SWS	2.9	850	838	6	8.42	8.45	1120	61.0	P-FYELD, LV: CODI&SCSOR
370801	4870316	SPSWE14	SWS					8.72	8.58	1185	66.0	Q-FYELD&CODI
370802	4870442	SPSWE15	SWS					8.70	8.53	1205	73.0	Q-CODI
370803	4870438	SPSWE16	SWS					8.45	8.38	1140	64.0	P-FYELD, CODI&SCSOR
370804	4870463	SPSWE17	SWS					8.59	8.65	1145	63.0	P-

COMMENTS: These soft white spring wheats were atypical in both flour yield and baking performance of the standards. Six appeared to have strong gluten properties and were test baked by the bread test. A couple of the better soft types (#5 and 15) and hard types (6 and 8) are footnoted as promising, however, no real confidence can be made of these conclusions.

NURSCO 108

PENDLETON, OR

M.F. KOLDING

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	BABS
*370806	LEWJAIN	C1017909	SWW	61.4	72.8	0.31	93.9	9.0	55.7	2M	
370807	DAWS/SM-4/2/MDM/SM-11	5/ FW81454-30	SWW	60.7	72.3	0.41	87.0	8.6	54.2	1M	
370808	HILL	C1017954	SWW	60.6	72.0	0.48	82.5	11.8	54.1	2M	
370809	YH/MDM/2/TRIT. SPELTA/3/SUWON92 /ROEDEL/4	FW75336-10	SWW	60.5	64.1	0.41	76.9	9.3	57.1	2M	
370810	DUSTY	P1486429	SWW	60.2	69.7	0.44	82.1	10.2	55.3	2M	
370811	LEWJAIN	C1017909	SWW	60.1	71.0	0.46	82.5	10.6	54.9	2M	
370812	STEPHENS/3/EXCELLSIOR/2/	FW82167-30	SWW	61.2	67.9	0.39	82.6	10.3	56.4	2M	
370813	STEPHENS*2/SM-4	FW81464-33	SWW	60.8	67.0	0.38	82.4	9.8	57.5	2M	
370814	SPN/2/PILLAN/CERCO	FW82176-30	SWW	60.0	67.0	0.39	81.7	10.2	56.2	2M	
370815	DAWS	C1017419	SWW	60.8	69.4	0.43	82.0	9.9	56.6	2M	
370816	FW73830-002/3/MOLDOVA/2/RB/	6/ FW205-19B	SWW	60.3	69.0	0.40	83.2	9.8	53.2	1M	
370817	WA6363/M81-663, LUKE*2/P1178210	5/ FW83170 D5	SWW	61.9	71.4	0.38	88.0	9.0	56.0	2M	
370818	RB/1523-DC/3/63-189-607/CAMA	W81363 Y60	HRW	60.9	71.8	0.34	89.5	10.1	57.6	3M	58.4
370819	RB/1523-DC/3/63-189-607/CAMA	FW81363 Y6	HRW	60.5	71.4	0.33	89.9	10.4	55.9	2M	57.0
370820	UTE	P1490017	HRW	61.9	70.0	0.34	87.8	9.1	58.2	4M	59.0

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

*370000 is the second set of the 1987 crop.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 108

PENDLETON, OR

M.F. KOLDING

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	RMKS
370806	LEWJAIN	CI017909	SWW						9.22	9.11	
370807	DAWS/SM-4/2/MDM/SM-11	FW81454-30	SWW						9.32	9.17	
370808	HILL	CI017954	SWW						9.02	9.22	
370809	YH/MDM/2/TRIT. SPELTA/3/SUWON92 /ROEDEL/4	FW75336-10	SWW						8.97	8.90	P-FYELD
370810	DUSTY	PI486429	SWW						9.00	9.02	
370811	LEWJAIN	CI017909	SWW						9.04	9.10	
370812	STEPHENS/3/EXCELLSIOR/2/	FW82167-30	SWW						8.95	8.98	Q-FYELD
370813	STEPHENS*2/SM-4	FW81464-33	SWW						8.96	8.94	"
370814	SPN/2/PILLAN/CERCO	FW82176-30	SWW						9.15	9.17	"
370815	DAWS	CI017419	SWW						8.86	8.85	
370816	FW73830-002/3/MOLDOVA/2/RB/	FW205-19B	SWW						9.32	9.30	
370817	WA6363/M81-663, LUKE*2/PI178210	FW83170 D5	SWW	58.3	2.2	755	749	7	9.46	9.35	
370818	RB/1523-DC/3/63-189-607/CAMA	W81363 Y60	HRW	56.6	1.8	750	725	8			Q-MT, LVOL&BCRGR
370819	RB/1523-DC/3/63-189-607/CAMA	FW81363 Y6	HRW	59.9	2.6	760	816	5			Q- " " "
370820	UTE	PI490017	HRW								

COMMENTS: Several of these selections were low in flour yield compared to the better check varieties. The two hard red winter selections were short in mixing time and heavy in crumb grain compared to Ute. The SWW's footnoted appear very promising in overall quality.

ADVANCED WINTER WHEAT

PENDLETON, OR

C.R. ROHDE

NURSCO 109

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/
*370821	STEPHENS	C1017596	SWW	60.8	72.5	0.41	87.2	7.8	51.2
370822	TRES	C1017917	CLUB	62.5	72.6	0.43	86.1	7.6	50.9
370823	6720-10/YMH/HYS	ORCW8519	SWW	62.2	71.0	0.43	84.4	8.6	51.2
370824	DAWS/SM4//SM11	6/ORFW301	SWW	62.6	72.0	0.43	85.5	8.7	53.2
370825	RMN 3-71/TORIM	ORCW8522	SWW	64.1	69.1	0.38	84.9	8.7	52.3
370826	7C/CNO//CAL/3/YMH	6/ORCW8314	SWW	62.4	71.3	0.39	86.8	7.6	52.3
370827	HYSLOP/CERCO.H-308	OR843	SWW	62.0	68.4	0.43	80.7	7.5	54.6
370828	HYSLOP/CERCO.B-307	6/OR842	SWW	63.0	73.0	0.43	86.6	8.4	53.0
370829	NOR/YMH//6720-13	ORCW8416	SWW	61.8	69.3	0.43	81.6	8.6	52.2
370830	PAHA//SEL.72-330/DAWS	OR855	CLUB	62.8	71.2	0.39	87.2	8.4	52.5
370831	ND/P101//BB/GLL	ORCW8424	SWW	63.5	72.1	0.39	88.2	7.8	52.8
370832	WA4877/V866336//DAWS	ORCW8516	SWW	62.9	73.5	0.42	87.7	7.9	53.7
370833		6/ORCW8724	SWW	63.1	70.3	0.40	85.1	7.2	53.7
370834		5/ORCW8725	SWW	61.6	72.1	0.42	86.3	8.0	52.8
370835		6/OR830211	SWW	61.9	72.1	0.42	86.4	8.6	53.5
370836		6/OR832665	SWW	65.2	68.8	0.41	82.4	8.4	52.0
370837		OR833032	SWW	61.4	69.0	0.39	83.9	8.5	51.8
370838		6/OR833646	SWW	62.4	71.0	0.38	87.2	8.3	52.7
370839		6/OR833649	SWW	61.9	71.1	0.35	89.4	8.5	52.1
370840		6/OR833725	SWW	60.9	72.8	0.34	91.9	8.2	52.1
370841		85B-581	SRW	59.6	70.9	0.35	89.1	8.2	52.7

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

4/ Observed Values Corrected to 8% Protein.

*370000 is the second part of the 1987 crop.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 109

PENDLETON, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	MTYPE	CODI	CODIC 4/	CAVOL	SCSOR	RMKS
370821	STEPHENS	C1017596	SWW	2L	8.96	8.94	1195	70.0	
370822	TRES	C1017917	CLUB	1L	9.10	9.07	1275	75.0	
370823	6720-10/YMH/HYS	ORCW8519	SWW	2L	8.87	8.94	1060	57.0 VP-CAVOL	
370824	DAWS/SM4//SM11	ORFV301	SWW	3L	9.16	9.24	1180	67.0 Q-CAVOL	
370825	RMN 3-71/TORIM	ORCW8522	SWW	3L	9.04	9.11	1130	63.0 P-CAVOL	
370826	7C/CNO//CAL/3/YMH	ORCW8314	SWW	2L	8.89	8.84	1230	73.0	
370827	HYSLOP/CERCO.H-308	OR843	SWW	3L	8.39	8.33	1125	65.0 Q-FYELD, P-SCSOR	
370828	HYSLOP/CERCO.B-307	OR842	SWW	2L	9.16	9.21	1210	71.0	
370829	NOR/YMH//6720-13	ORCW8416	SWW	3L	8.29	8.35	1035	55.0 VP-CODI&CAVOL	
370830	PAHA//SEL.72-330/DAWS	OR855	CLUB	3L	8.91	8.94	975	52.0 VP-CAVOL	
370831	ND/P101//BB/GLL	ORCW8424	SWW	2L	9.25	9.23	1090	59.0 VP-CAVOL	
370832	WA4877/V866336//DAWS	ORCW8516	SWW	3L	8.51	8.50	1185	67.0 P-CODI&CAVOL	
370833		ORCW8724	SWW	5L	8.87	8.79	1265	76.0	
370834		ORCW8725	SWW	3L	8.94	8.94	1255	75.0	
370835		OR830211	SWW	3L	8.97	9.04	1180	69.0 Q-CAVOL	
370836		OR832665	SWW	4L	9.12	9.17	1240	72.0 Q-FYELD	
370837		OR833032	SWW	2M	9.11	9.17	1185	66.0 P-SCSOR	
370838		OR833646	SWW	3L	8.91	8.95	1250	72.0	
370839		OR833649	SWW	3L	8.86	8.92	1250	72.0	
370840		OR833725	SWW	3L	8.96	8.98	1245	71.0	
370841		85B-581	SRW	2L	8.67	8.70	885	42.0 P-CODI&SCSOR	

COMMENTS: These selections greatest weakness was in sponge cake baking. Stephens was lower than expected from the low protein level in cake baking.
Note that some are footnoted as promising but marginal in one or more factors (Remarks).

NURSCO 110

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/
*370842 STEPHENS		C1017956	SWW	58.8	71.9	0.40	87.1	8.7	53.2
370843		ORCR8718	HRW	62.8	77.1	0.39	92.7	9.5	56.1
370844		OR830282	HRW	61.5	71.6	0.41	84.9	9.6	59.7
370845		OR831134	HRW	62.5	71.0	0.34	87.8	9.5	60.3
370846		OR831455	HRW	58.0	67.7	0.38	82.4	8.7	56.8
370847 UNKNOWN CLUB		5/86-297	CLUB	54.4	72.3	0.39	88.4	9.0	50.0
370848 UNKNOWN CLUB		5/86-314	CLUB	55.4	72.8	0.40	88.4	9.3	50.3
370849 PAHA//SEL.72-330/DAWS(M76-429)PW77-41		6/86-315	CLUB	57.0	71.0	0.37	87.8	9.0	51.0
370850 DAWS/FARO		6/86-372	CLUB	55.9	71.8	0.40	87.0	8.7	51.3
370851 DAWS/FARO		5/86-373	CLUB	55.5	71.5	0.40	86.9	9.0	52.0
370852 I-372/CAMA//SENCOR CLUB		6/86-379	SRW	53.8	72.2	0.39	88.1	9.4	51.7
370853 OWM810396A-1H,YMH/MORO,F1//JCM		5/86-383	SWW	54.1	70.6	0.38	86.8	9.4	53.6
370854 PAHA//SEL.72-330/DAWS(M76-429)PW77-41		6/86-1425	SWW	55.4	71.7	0.37	88.8	8.8	52.9
370855 JCM/3/EG/178383//2*YMH		6/86-395	SWW	54.1	70.8	0.42	84.7	9.5	53.1
370856 EG/178383,M65-2124//YMH*2/3/AV/ERA		6/86-516	SWW	53.9	70.5	0.40	85.7	9.0	53.8
370857 DAWS/FARO		5/86-536	SWW	54.2	71.7	0.40	87.0	9.4	51.7
370858 JCM/3/WAR//BURT/178383		5/86-1023	SWW	53.0	73.2	0.39	89.3	8.3	51.9
370859 TRES		C1017917	CLUB	53.5	72.1	0.39	88.3	8.6	51.2
370860 JCM//7C/MORO		86-1029	SWW	51.5	71.2	0.39	87.0	9.2	52.8
370861 JCM/3/EG/178383//2*YMH		6/86-1033	SWW	61.2	72.1	0.41	86.6	9.5	52.2
370862 7C/MORO//JCM		86-1039	SWW	61.1	67.5	0.37	83.5	8.9	53.2
370863 7C/MORO//JCM		86-1041	SWW	60.5	70.3	0.39	85.5	9.5	51.5
370864 SPN/JCM		86-1063	SWW	60.6	70.9	0.42	84.5	10.0	53.0

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

4/ Observed Values Corrected to 9% Protein.

*370000 is the second part of the 1987 crop.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

MORO, OR

C.R. ROHDE

NURSCO 110

LABNUM	VARIETY	IDNO	CLASS	MTYPE	CODI	CODIC 4/	CAVOL	SCSOR	RMKS
370842	STEPHENS	C1017956	SWW	3L	9.12	9.09	1135	60.0	Excellent FYELD
370843		ORCR8718	HRW	7M	8.74	8.78	1080	59.0	P-CODI&CAVOL
370844		OR830282	HRW	3M	8.55	8.60	1005	56.0	P- "
370845		OR831134	HRW	7M	8.39	8.43	1085	59.0	P- "
370846		OR831455	HRW	4L	8.29	8.26	1115	60.0	P- " &FYELD
370847	UNKNOWN CLUB	86-297	CLUB	1L	9.30	9.30	1260	72.0	
370848	UNKNOWN CLUB	86-314	CLUB	2L	9.06	9.08	1205	68.0	
370849	PAHA//SEL.72-330/DAWS(M76-429)PW77-41	86-315	CLUB	2L	9.31	9.31	1185	64.0	
370850	DAWS/FARO	86-372	CLUB	2L	9.31	9.29	1200	65.0	
370851	DAWS/FARO	86-373	CLUB	2L	9.16	9.16	1275	72.0	
370852	1-372/CAMA//SENCOR CLUB	86-379	SRW	2L	9.35	9.39	1200	64.0	
370853	OWW810396A-1H,YMH/MORO,F1//JCM	86-383	SWW	3L	9.66	9.71	1280	75.0	Outstanding Baking
370854	PAHA//SEL.72-330/DAWS(M76-429)PW77-41	86-1425	SWW	3L	9.34	9.32	1140	61.0	Q-SCSOR
370855	JCM/3/EG/178383//2*YMH	86-395	SWW	3L	9.34	9.39	1265	72.0	Good Baking
370856	EG/178383,M65-2124//YMH*2/3/AV/ERA	86-516	SWW	3L	9.26	9.26	1190	63.0	
370857	DAWS/FARO	86-536	SWW	2L	9.16	9.21	1240	67.0	
370858	JCM/3/WAR//BURT/178383	86-1023	SWW	2L	9.40	9.32	1250	69.0	
370859	TRES	C1017917	CLUB	1L	9.37	9.35	1220	65.0	Q-SCSOR
370860	JCM//7C/MORO	86-1029	SWW	3L	9.60	9.62	1095	58.0	
370861	JCM/3/EG/178383//2*YMH	86-1033	SWW	3L	9.44	9.49	1150	64.0	
370862	7C/MORO//JCM	86-1039	SWW	3L	9.64	9.63	1175	66.0	P-FYELD
370863	7C/MORO//JCM	86-1041	SWW	3L	9.76	9.82	1105	62.0	Q- "
370864	SPN/JCM	86-1063	SWW	3M	9.60	9.71	1070	58.0	P-SCSOR

COMMENTS: Most of these selections were equal to or better than the check varieties. All were atypical in cake baking. The four HRW's were not bread baked because of the low protein.

110 CONTINUED

C.R. ROHDE

MORO, OR

NURSCO 113

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/
370888	VORO/MARIS NIMROD	OR8522	HRW	60.2	68.5	0.38	83.9	8.7	57.5
LABNUM	VARIETY	IDNO	CLASS	MTYPE	CODI	CODIC 4/	CAVOL	SCSOR	RMKS
370888	VORO/MARIS NIMROD	OR8522	HRW	6L	8.37	8.35	1115	64.0	P-FYELD

NURSCO 112

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/
*370867	STEPHENS	C1017596	SWW	58.7	70.0	0.41	76.8	8.6	53.5
370868	TRES	C1017917	CLUB	60.6	72.2	0.41	80.8	8.4	50.4
370869	6270-10//YMH/HYS	6/ORCW8519	SWW	59.6	69.4	0.41	77.7	9.1	52.5
370870	DAWS/SM4//SM11	6/ORFW301	SWW	57.8	71.4	0.41	79.5	8.8	52.7
370871	FMN F3-71/TORIM	ORCW8522	SWW	60.8	68.2	0.41	76.8	8.9	54.0
370872	7C/CNO//CAL/3/YMH	ORCW8314	SWW	59.4	70.7	0.40	79.6	8.2	51.7
370873	HYSLOP/CERCO.B-307	OR842	SWW	59.7	69.4	0.45	73.6	8.5	52.9
370874	ND/P101//BB/GLL	ORCW8424	HW	60.5	72.1	0.45	81.7	7.7	55.5
370875	WA4877/V866336//DAWS	6/ORCW8516	SWW	59.5	70.9	0.42	79.5	8.2	51.4
370876		6/ORCW8724	SWW	59.6	73.3	0.42	83.9	7.9	52.6
370877		6/ORCW8725	SWW	59.5	73.5	0.45	83.9	8.6	51.8
370878		6/ORCW8726	SWW	57.9	71.4	0.38	81.8	8.4	54.5
370879		OR830166	SWW	60.1	66.2	0.35	76.5	8.3	53.1
370880		6/OR830211	SWW	62.8	68.0	0.37	77.1	8.3	54.3
370881		6/OR830801	SWW	59.8	69.4	0.37	78.9	8.1	52.0
370882		OR832665	SWW	59.9	66.4	0.37	73.4	8.3	54.2
370883		6/OR832784	SWW	59.8	68.3	0.36	77.5	8.2	53.2
370884		6/OR833649	SWW	60.5	71.0	0.36	83.7	9.0	53.7
370885		6/OR833765	SWW	60.1	69.8	0.36	81.6	8.1	52.3
370886		6/OR834686	SWW	59.3	71.5	0.38	82.8	8.3	52.6
370887	VORO/STEPHENS	85B-581	SRW	58.1	56.2	0.36	58.9	8.1	52.0

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 8% Protein.

4/ Observed Values Corrected to 8% Protein.

* 370000 is the second part of the 1987 crop.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

ADVANCED WINTER

NURSCO 112

MORO, OR

C.R. ROHDE

LABNUM	VARIETY	IDNO	CLASS	MTYPE	CODI	CODIC 4/	CAVOL	SCSOR	RMKS
370867	STEPHENS	C1017596	SWW	4M	9.17	9.24	1180	65.0	
370868	TRES	C1017917	CLUB	2L	9.04	9.07	1225	68.0	
370869	6270-10//YMH/HYS	ORCW8519	SWW	3M	8.82	8.95	1215	72.0 Q-FYELD	
370870	DAWS/SM4//SM11	ORFW301	SWW	3L	8.82	8.91	1195	70.0	
370871	FMN F3-71/TORIM	ORCW8522	SWW	4L	8.81	8.91	1190	71.0 Q-FYELD	
370872	7C/CNO//CAL/3/YMH	ORCW8314	SWW	2L	8.56	8.58	1210	74.0 Q-CODI	
370873	HYSLOP/CERCO.B-307	OR842	SWW	5L	7.95	8.00	1080	63.0 Q-FYELD P-CODI&SCSOR	
370874	ND/P101//BB/GLL	ORCW8424	HWW	6L	7.86	7.84	1075	62.0 "Hard"	
370875	WA4877/V866336//DAWS	ORCW8516	SWW	8L	8.67	8.70	1255	76.0 Q-CODI	
370876		ORCW8724	SWW	6L	8.84	8.83	1250	75.0	
370877		ORCW8725	SWW	4L	8.87	8.94	1185	70.0	
370878		ORCW8726	SWW	3L	9.05	9.09	1155	65.0	
370879		OR830166	SWW	4L	9.29	9.32	1235	74.0 P-FYELD "Good Baking"	
370880		OR830211	SWW	4L	8.86	8.90	1195	72.0 Q-FYELD	
370881		OR830801	SWW	5L	8.86	8.87	1245	77.0	
370882		OR832665	SWW	3L	8.85	8.88	1110	64.0 Q-SCSOR P-FYELD	
370883		OR832784	SWW	4L	8.79	8.81	1205	73.0 Q-FYELD	
370884		OR833649	SWW	3L	8.92	9.03	1205	68.0	
370885		OR833765	SWW	5L	8.86	8.87	1235	71.0	
370886		OR834686	SWW	3L	8.91	8.95	1205	69.0	
370887	VORO/STEPHENS	85B-581	SRW	5L	8.60	8.61	1225	69.0 P-FYELD Q-CODI	

COMMENTS: Both Stephens and Tres were low in milling score and sponge cake score. Experimental lines were judged accordingly, and several appear equal to or better than the check varieties in overall quality.

NURSCO 114

PULLMAN, WA

R.E. ALLAN

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
370889		774	HWW	61.9	75.3	0.40	88.8	10.9	65.6	5H
370890		784	HWW	61.9	74.3	0.39	88.5	11.0	64.8	5H
370891		786	HWW	62.0	73.8	0.39	88.5	10.9	65.4	5H
370892		790	HRW	63.6	72.3	0.37	85.9	11.6	67.5	4H
370893		792	HWW	62.6	71.7	0.38	84.6	11.1	66.6	3H
370894		798	HWW	62.3	74.2	0.39	88.5	11.5	66.6	4H
370895		6/802	HWW	62.4	73.4	0.40	86.3	11.0	67.1	5H
370896	RED CHECK	804	HRW	62.3	73.9	0.39	88.2	11.2	66.4	4H
370897		6/805	HRW	61.8	74.2	0.38	89.1	11.4	65.6	4H
370898		806	HWW	61.9	74.6	0.40	88.7	11.1	65.4	3H
370899		807	HWW	62.6	75.1	0.40	89.5	10.2	64.6	4H
370900		809	HWW	61.6	74.0	0.40	87.7	10.5	66.2	4M
370901		810	HWW	63.2	73.5	0.38	88.6	11.0	64.4	5H
370902		813	HWW	61.0	73.5	0.40	88.0	10.7	66.0	5H
370903		814	HWW	62.6	74.7	0.39	88.8	11.2	63.8	4H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 11% Protein.

4/ Observed Values Corrected to 11% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

BURT ML CANDIDATES

PULLMAN, WA

R.E. ALLAN

NURSCO 114

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					3/			4/		
370889		774	HWW	63.2	63.3	4.0	815	821	5 Q-LVOL&BCRGR	
370890		784	HWW	65.5	65.5	4.1	855	855	6 Q- " "	
370891		786	HWW	66.5	66.6	4.6	840	846	5 Q- " "	
370892		790	HRW	65.8	65.2	3.4	860	823	4 Q- " "	
370893		792	HWW	65.9	65.8	3.1	850	844	5 Q-FYELD, LVOL&BCRGR	
370894		798	HWW	65.8	65.3	3.5	905	874	6 Q-P-BCRGR	
370895		802	HWW	65.3	65.3	4.3	880	880	2	
370896	RED CHECK	804	HRW	65.8	65.6	3.9	900	888	2	
370897		805	HWW	64.7	64.3	4.1	900	875	2	
370898		806	HWW	64.2	64.1	3.7	875	869	7 P-BCRGR	
370899		807	HWW	63.0	63.8	4.2	880	930	7 P- "	
370900		809	HWW	64.4	64.9	2.8	880	911	7 P- "	
370901		810	HWW	63.6	63.6	4.4	885	885	6 Q-P "	
370902		813	HWW	65.4	65.7	4.6	880	899	4 Q- "	
370903		814	HWW	63.7	63.5	4.3	910	898	5 Q- "	

COMMENTS: Only #802 and 805 have satisfactory overall quality. All but 790 and 792 were excellent in milling quality, but all had coarse and heavy type crumb structure.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

HARD/DUAL PURPOSE

PULLMAN, WA

R.E. ALLAN

NURSCO 115

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	CODI	CODIC 4/
*370904		5442	SWW	61.9	71.2	0.36	83.2	9.8	57.8	6M	8.79	8.88
370905		443	SWW	60.7	68.1	0.35	78.0	8.5	57.4	2M	8.94	8.88
370906		445	SWW	59.9	67.6	0.34	77.6	8.6	56.7	5M	8.82	8.78
370907	S1/DTN/820/0/1834/178383	6446	HWW	62.3	74.2	0.38	86.6	9.3	60.6	6M	8.19	8.21
370908		6448	SWW	62.7	72.7	0.34	86.7	8.5	56.7	4M	8.92	8.87
370909		6451	SWW	60.8	71.7	0.36	84.2	8.3	57.7	3M	8.76	8.69
370910	DAWS #2/CHERN	455	HRW	63.2	71.4	0.36	84.2	8.9	58.9	6L	8.26	8.25
370911	DAWS #2/STORM	456	HWW	63.8	72.1	0.36	86.1	9.0	61.3	5M	7.94	7.94
370912	DAWS	469	SWW	63.2	71.5	0.34	85.5	9.0	55.7	5M	8.49	8.49

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 9% Protein.

*370000 is the second set of the 1987 crop.

NURSCO 115

PULLMAN, WA

R.E. ALLAN

LABNUM	VARIETY	IDNO	CLASS	CAVOL	SCSOR	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
370904	S1/DTN/820/0/1834/178383	442	SWW	1290	78.0	60.3	59.5	3.8	885	837	2	Dual Purpose
370905		443	SWW	1310	80.0	58.6	59.1	2.2	775	805	8	Low FYELD
370906		445	SWW	1280	77.0	58.0	58.4	3.6	805	829	6	" "
370907		446	HWW	1120	64.0	62.1	61.8	3.8	865	846	4	Hard White
370908		448	SWW	1315	79.0	57.4	57.9	3.9	795	825	4	Dual Purpose,Q-BCRG
370909	DAWS #2/CHERN	451	SWW	1280	77.0	57.7	58.4	2.9	725	767	9	Soft White
370910		455	HRW	1185	68.0	60.5	60.6	3.9	700	706	6	Q-BCRGR&LVOL
370911		456	HWW	1135	65.0	62.0	62.0	3.7	705	705	6	Q- " "
370912		469	SWW	1270	76.0	57.4	57.4	3.9	815	815	6	" "

COMMENTS: Selection ID No. 442 has good overall dual purpose quality; it was good to excellent in cookie, cake, and bread tests with milling about equal to Daws. No. 446 is a good hard white with poor pastry properties. No. 448 has some potential for dual baking quality. Note the wheat class determined by NIR kernel hardness.

PULLMAN, WA

R.E. ALLAN

NURSCO 116

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/
370913		361	CLUB	62.7	73.7	0.42	83.9	8.8	49.6
370914		362	CLUB	61.8	74.2	0.40	86.4	9.1	51.1
370915		364	CLUB	64.2	72.1	0.42	80.5	9.6	51.5
370916		371	CLUB	62.0	74.5	0.40	85.9	8.9	52.4
370917		5/373	CLUB	61.5	74.5	0.37	88.7	8.3	51.6
370918		5/374	CLUB	62.1	74.6	0.36	89.1	9.5	49.2
370919		6/375	CLUB	62.7	74.5	0.36	89.9	8.8	50.0
370920		5/376	CLUB	61.4	75.1	0.39	88.3	8.7	51.1
370921		6/377	CLUB	62.1	74.7	0.39	88.1	9.2	50.5
370922		379	CLUB	62.2	73.7	0.39	86.8	9.0	51.0
370923		5/380	CLUB	62.3	76.3	0.40	89.6	9.0	50.4
370924		5/381	SRW	61.4	75.4	0.40	87.9	9.0	49.9
370925		5/382	CLUB	61.6	74.7	0.41	86.5	9.2	51.1
370926		383	CLUB	62.1	72.3	0.33	88.3	9.7	49.9
370927		5/387	CLUB	61.9	75.5	0.39	88.5	9.1	50.3
370928		6/388	CLUB	62.1	72.7	0.39	84.9	9.1	51.4
370929		6/389	CLUB	61.6	75.9	0.40	87.9	9.0	49.6
370930		391	CLUB	61.7	74.6	0.40	86.0	8.9	49.0
370931		6/392	CLUB	60.7	73.7	0.34	88.9	8.8	49.3
370932		6/406	CLUB	60.9	74.4	0.39	87.4	9.5	48.9
370933		407	CLUB	61.7	74.3	0.38	86.6	9.5	48.6
370934		5/411	CLUB	62.6	74.0	0.39	87.0	9.2	49.6
370935	CREW	418	CLUB	60.6	73.5	0.38	86.3	9.0	50.4
370936	CREW	419	CLUB	61.6	73.5	0.40	85.1	8.6	51.8
370937	CREW	420	CLUB	61.9	75.2	0.39	88.1	8.9	50.7
370938	CREW	421	CLUB	62.1	74.5	0.38	87.2	8.9	51.7
370939	CREW	422	CLUB	62.1	74.9	0.37	88.4	8.9	51.4
370940	TRES	423	CLUB	62.9	75.3	0.39	88.3	9.0	49.9
370941	TRES ML	6/424	CLUB	62.4	74.4	0.38	88.0	8.7	51.9
370942	ML A	6/425	CLUB	61.5	73.7	0.38	87.6	8.4	51.0
370943	ML B	426	CLUB	61.2	71.8	0.39	84.5	8.8	50.5
370944	PAHA	427	CLUB	61.8	75.4	0.39	87.4	8.8	50.9
370945	P ML	428	CLUB	62.4	75.0	0.42	85.5	9.2	49.9
370946	MORO	429	CLUB	60.0	75.5	0.40	87.8	9.6	52.5
370947	M ML	430	CLUB	62.6	75.0	0.45	83.9	9.2	49.0

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 9% Protein.

4/ Observed Values Corrected to 9% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

USDA, SEA AR
WESTERN WHEAT
PULLMAN, WA.

ADVANCED CLUB

PULLMAN, WA

R.E. ALLAN

NURSCO 116

LABNUM	VARIETY	IDNO	CLASS	MTYPE	CODI	CODIC 4/	CAVOL	SCSOR	RMKS
370913		361	CLUB	2M	8.64	8.62	1285	75.0 Q-MSCOR&CODI	
370914		362	CLUB	2M	8.96	8.97	1235	69.0 P-SCSOR	
370915		364	CLUB	2M	8.22	8.27	1170	64.0 P-MSCOR, CODI&SCSOR	
370916		371	CLUB	2M	8.96	8.96	1245	70.0 Q-SCSOR	
370917		373	CLUB	2L	9.35	9.30	1300	78.0	
370918		374	CLUB	1M	8.91	8.95	1330	79.0	
370919		375	CLUB	1M	9.07	9.06	1310	73.0 Q-SCSOR	
370920		376	CLUB	1M	8.91	8.89	1325	79.0	
370921		377	CLUB	1M	8.91	8.93	1300	73.0 Q-SCSOR	
370922		379	CLUB	1M	8.65	8.65	1285	73.0 Q-CODI&SCSOR	
370923		380	CLUB	1M	8.92	8.92	1290	78.0 "Soft Red"?	
370924		381	SRW	1M	8.91	8.91	1295	76.0	
370925		382	CLUB	1M	9.04	9.05	1280	77.0	
370926		383	CLUB	1M	9.27	9.32	1230	74.0 Q-FYELD&SCSOR	
370927		387	CLUB	1M	9.16	9.17	1290	77.0	
370928		388	CLUB	2M	9.15	9.16	1285	75.0 Q-FYELD	
370929		389	CLUB	1M	8.85	8.85	1275	74.0	
370930		391	CLUB	1M	9.17	9.17	1245	69.0 P-SCSOR	
370931		392	CLUB	1M	9.01	9.00	1300	77.0	
370932		406	CLUB	1M	8.95	8.99	1260	73.0 Q-SCSOR	
370933		407	CLUB	1M	9.01	9.05	1270	72.0 Q-SCSOR	
370934		411	CLUB	2M	8.94	8.95	1305	78.0	
370935	CREW	418	CLUB	1M	9.27	9.27	1305	76.0	
370936	CREW	419	CLUB	2M	9.00	8.97	1300	78.0	
370937	CREW	420	CLUB	2M	8.94	8.93	1265	73.0 Q-SCSOR	
370938	CREW	421	CLUB	1M	8.97	8.97	1275	76.0	
370939	CREW	422	CLUB	1M	8.97	8.97	1275	76.0	
370940	TRES	423	CLUB	1M	8.97	8.97	1265	72.0 Q-SCSOR	
370941	TRES ML	424	CLUB	2M	8.97	8.95	1275	77.0	
370942	ML A	425	CLUB	2M	8.87	8.83	1290	76.0	
370943	ML B	426	CLUB	2M	8.81	8.80	1275	77.0 Q-FYELD	
370944	PAHA	427	CLUB	1M	9.41	9.41	1265	77.0	
370945	P ML	428	CLUB	2M	9.16	9.18	1240	73.0 Q-SCSOR Higher Ash	
370946	MORO	429	CLUB	2M	9.01	9.07	1240	71.0 Q-SCSOR	
370947	M ML	430	CLUB	2M	8.85	8.86	1235	72.0 Q-SCSOR Higher Ash	

USDA, SEA AR
WESTERN WHEAT
PULLMAN, WA.

ADVANCED CLUB

PULLMAN, WA

R.E. ALLAN

NURSCO 116

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/
370948	OR7142	431	CLUB	62.0	74.5	0.40	86.9	8.6	51.7
370949	OR ML	432	CLUB	62.1	73.3	0.43	84.2	8.9	51.6
370950	BBE	433	CLUB	60.3	72.5	0.39	83.4	8.4	49.9
370951	BBE ML	434	CLUB	62.3	72.3	0.40	82.7	8.6	50.1
370952	ML C	435	CLUB	62.0	73.7	0.37	85.4	8.6	51.5
370953	TYEE	436	CLUB	60.6	75.4	0.40	87.3	8.1	53.5
370954	TRES ML87	440	CLUB	62.6	74.6	0.38	86.6	8.8	51.5
370955	WA7166	437	CLUB	61.3	71.1	0.35	84.4	9.4	55.1
370956	WA7217	365	CLUB	62.0	74.4	0.34	90.2	9.5	53.8
370957	WA7437	438	CLUB	62.2	71.6	0.33	86.2	10.0	55.7

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

ADVANCED CLUB

R.E. ALLAN

PULLMAN, WA

NURSCO 116

LABNUM	VARIETY	IDNO	CLASS	MTYPE	CODI	CODIG 4/	CAVOL	SCSOR	RMKS
370948	OR7142	431	CLUB	2M	8.75	8.72	1285	77.0	Higher Ash
370949	OR ML	432	CLUB	2M	8.79	8.78	1285	78.0	
370950	BBE	433	CLUB	1M	9.39	9.34	1395	83.0	
370951	BBE ML	434	CLUB	1M	8.95	8.92	1265	74.0	Q-MSCOR&SCSOR
370952	ML C	435	CLUB	2M	9.15	9.12	1255	71.0	Q-SCSOR
370953	TYEE	436	CLUB	3L	9.20	9.14	1340	78.0	
370954	TRES ML87	440	CLUB	1M	9.29	9.27	1295	78.0	
370955	WA7166	437	CLUB	5M	9.04	9.07	1250	72.0	Q-FYELD&SCSOR
370956	WA7217	365	CLUB	2M	8.72	8.76	1245	71.0	Q-CODI&SCSOR
370957	WA7437	438	CLUB	3M	9.02	9.10	1240	71.0	Q-FYELD&SCSOR

COMMENTS: There are several good quality club wheat selections in this group. Several of the multilines of the varieties were higher is flour ash which lowered the milling scores. See "Remarks" for questionable or major deficiencies.

R.E. ALLAN

NURSCO 117

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/
370958		6/1	SWW	63.7	72.9	0.34	86.2	8.4	56.5
370959		2	SWW	62.0	73.1	0.36	85.1	9.7	57.2
370960		3	SWW	63.2	73.7	0.36	87.9	9.7	57.9
370961		6/4	SWW	62.9	72.1	0.34	86.1	9.2	58.5
370962	WA7433	6	SRW	62.1	70.7	0.38	81.3	10.6	57.4
370963		8	SRW	58.9	66.0	0.37	75.7	11.0	59.1
370964		9	SRW	60.0	69.6	0.39	81.2	10.4	59.4
370965	WA7166 HYAK	12	SWW	61.8	74.4	0.35	89.4	9.7	57.6
370966		13	SWW	59.7	73.8	0.35	87.5	10.2	58.1
370967		14	SWW	59.6	69.6	0.38	80.6	9.4	57.7
370968		17	SWW	63.0	73.1	0.35	87.6	10.2	59.4
370969		6/18	SWW	62.5	73.0	0.35	88.0	9.6	58.1
370970		19	SWW	60.0	71.3	0.33	85.6	10.9	62.2
370971		21	SWW	62.7	72.2	0.35	86.4	10.3	60.5
370972		23	SWW	63.0	69.7	0.34	81.4	9.5	60.3
370973		5/24	SWW	59.4	73.4	0.35	88.4	10.0	59.2
370974		6/25	SWW	63.0	71.9	0.34	87.4	9.7	60.1
370975		6/30	SWW	61.6	72.1	0.36	85.8	9.4	58.9
370976		6/31	SWW	61.5	72.7	0.33	88.8	9.4	58.1
370977		5/33	SWW	61.7	74.1	0.34	90.1	9.1	57.0
370978		5/34	SWW	60.7	76.1	0.36	91.8	8.9	56.5
370979		6/38	SWW	61.0	73.6	0.36	86.5	9.1	56.8
370980		39	SWW	61.0	69.6	0.35	81.4	9.8	58.2
370981		41	SRW	62.2	73.6	0.37	87.5	9.8	55.3
370982		6/43	SWW	59.3	70.6	0.32	84.5	9.8	57.9
370983	NGN	56	SWW	63.1	72.5	0.32	89.0	9.0	59.1
370984	DAWS	71	SWW	62.9	72.3	0.35	86.8	8.7	58.4
370985		6/76	SWW	61.9	74.0	0.34	89.7	9.7	56.6
370986	TRES	78	SWW	62.2	73.1	0.34	88.0	8.8	55.2
370987	TRES C X	80	SWW	62.2	74.5	0.35	90.9	8.9	54.7

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 117

PULLMAN, WA

R.E. ALLAN

LABNUM	VARIETY	IDNO	CLASS	MTYPE	CODI	CODIC 4/	CAVOL	SCSOR	RMKS
370958		1	SWW	2L	9.36	9.19	1275	75.0	Excellent CODI
370959		2	SWW	2M	8.97	8.94	1230	68.0	Q-P-SCSOR
370960		3	SWW	3M	8.64	8.60	1200	67.0	Q-P-
370961		4	SWW	4M	9.35	9.26	1250	72.0	Q-SCSOR
370962	WA7433	6	SRW	2M	7.85	7.92	1170	67.0	P-FYELD,CODI&SCSOR
370963		8	SRW	4M	8.50	8.61	1195	68.0	P-
370964		9	SRW	2M	8.65	8.69	1220	70.0	P-FYELD Q-SCSOR
370965	WA7166 HYAK	12	SWW	4M	8.79	8.75	1230	71.0	Q-SCSOR
370966		13	SWW	4M	8.96	8.98	1215	70.0	Q-
370967		14	SWW	2M	9.02	8.96	1305	78.0	P-FYELD
370968		17	SWW	3M	8.69	8.71	1195	67.0	P-SCSOR
370969		18	SWW	2M	9.21	9.17	1230	70.0	Q-
370970		19	SWW	4M	8.61	8.71	1120	61.0	VP-
370971		21	SWW	3M	8.45	8.48	1185	68.0	P-CODI&SCSOR
370972		23	SWW	5M	8.52	8.47	1275	78.0	P-FYELD&CODI
370973		24	SWW	4M	8.90	8.90	1280	79.0	
370974		25	SWW	3M	8.62	8.59	1205	72.0	Q-SCSOR
370975		30	SWW	3M	8.89	8.82	1280	73.0	Q-
370976		31	SWW	2L	8.97	8.91	1265	74.0	
370977		33	SWW	3L	8.97	8.88	1300	79.0	
370978		34	SWW	2L	9.27	9.15	1260	73.0	Q-SCSOR
370979		38	SWW	3M	8.74	8.64	1270	75.0	
370980		39	SWW	4M	8.69	8.67	1225	69.0	P-FYELD&SCSOR
370981		41	SRW	2M	8.89	8.87	1235	72.0	Red, Q-SCSOR
370982		43	SWW	2M	8.86	8.84	1265	76.0	Q-FYELD
370983	NGN	56	SWW	3M	8.87	8.76	1265	75.0	
370984	DAWS	71	SWW	4L	8.71	8.57	1275	77.0	
370985		76	SWW	2M	8.65	8.62	1250	76.0	
370986	TRES	78	SWW	1M	8.85	8.72	1265	77.0	
370987	TRES C X	80	SWW	1M	8.82	8.70	1330	80.0	

COMMENTS: Several of these selections have good milling and baking properties. Selections No.'s 24, 33, 34 are especially noteworthy. Others have some deficiencies in flour yield and/or sponge cake making (See Remarks). A few are soft red and should be noted.

DITELOSOMIC LINES

NURSCO 118

C. F. Konzak

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH	MSCOR	FPROT	HARDNESS	MTYPE	RMKS
370988	CHINESE SPRING										
370989	DITELO 1AL	W7600022	SRW	60.0	59.3	0.36	75.3	11.3	34.6		
370990	DITELO 5AL	W7600026	SRW	60.0	55.3	0.40	69.1	13.8	42.3		
370991	DITELO 6AL	W7600027	SRW	60.0	56.1	0.41	69.5	11.6	31.8		
370992	DITELO 1BL	W7600031	SRW	60.0	52.5	0.49	61.8	14.9	47.5		
					55.1	0.45	66.2	14.0	34.9		
370993	DITELO 7BL	W7600037	SRW	60.0	55.1	0.37	70.4	13.3	36.9		
370994	DITELO 1DL	W7600039	SRW	60.0	51.5	0.38	66.2	12.6	38.7		
370995	DITELO 7DS	W7600044	SRW	60.0	59.2	0.48	69.3	14.6	47.0		
370996	DITELO 7DS	W7600045	SRW	60.0	56.9	0.42	69.8	14.2	43.2		
370997	TETRA 1A	W7600001	SRW	60.0	61.2	0.44	73.3	12.3	46/6		
370998	TETRA 3A	W7600003	SRW	60.0	56.0	0.41	69.6	12.1	30.6		
370999	TETRA 5A	W7600019	SRW	60.0	54.6	0.39	69.0	11.4	17.8		
371000	TETRA 7A	W7600007	SRW	60.0	55.8	0.37	71.2	13.0	36.9		
371001	TETRA 1B	W7600008	SRW	60.0	57.7	0.40	71.9	12.3	44.3		
371002	TETRA 2B	W7600009	SRW	60.0	54.3	0.40	68.4	12.7	38.3		
371003	TETRA 3B	W7600010	SRW	60.0	56.9	0.37	72.2	11.8	37.1		
371004	TETRA 7D	W7600021	SRW	60.0	54.6	0.40	68.3	13.0	32.3		
371005	NUL 2D-TETRA 2B	W7600071	SRW	60.0	59.0	0.45	70.4	11.7	30.6		
371006	NUL 5A-TETRA 5D	W7600082	SRW	60.0	55.1	0.48	64.9	12.0	15.4		
371007	NUL 6A-TETRA 6B	W7600085	SRW	60.0	55.1	0.36	71.3	11.0	43.8		
371008	NUL 7B-TETRA 7A	W7600091	SRW	60.0	56.3	0.40	70.3	12.6	34.5		
371009	NUL 7D-TETRA 7A	W7600093	SRW	60.0	62.6	0.37	78.6	11.8	47.4		
371010	NUL 7D-TETRA 7B	W7600094	SRW	60.0	62.6	0.35	79.5	11.5	40.3		
371011	POSO 2D	W7600054	SRW	60.0	59.7	0.37	75.5	11.3	36.6		

COMMENTS: These Diteლოსomic lines have soft endosperm but vary considerably in that physical property. All have rather poor flour milling properties with flour yields ranging from 51.5-62.6%. Dough mixing and baking tests have not been completed due to the small quantity of flour. Additional seeds from the 1988 crop will be milled and the two years composited for baking tests.

USDA, SEA AR
WESTERN WHEAT QUALITY LAB.
PULLMAN, WA.

PLANT BREEDERS I

NURSCO 119

CULDESAC, ID

W. MCPROUD

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	CODI	CODIC	RMKS
					1/	1/	1/	1/	2/			4/	
*371012	STEPHENS	CI017596	SWM	59.2	70.0	0.30	91.0	9.8	55.9	3M	9.32	9.30	
371013	DAWS	CI017419	SWM	62.8	66.2	0.27	88.0	10.0	56.1	5M	9.05	9.05	
371014	NUGAINES		SWM	60.4	66.8	0.27	88.6	9.3	56.8	4M	9.25	9.17	
371015	CITATION (PB1-80-WW-5)		6/SWM	61.6	68.8	0.30	89.5	9.6	56.5	5M	9.07	9.03	
371016	PB1-79-WW 57A		6/SWM	60.0	67.5	0.29	88.5	8.8	57.6	4L	9.51	9.38	Q-FYELD
371017	PB1-80-WW-3		6/SWM	61.2	69.0	0.29	90.4	9.6	56.2	5M	9.42	9.38	
371018	PB1-80-WW-6		5/SWM	60.0	71.9	0.34	90.9	9.1	55.8	4L	9.37	9.28	
371019	PB1-83-WW-11		6/SWM	62.0	69.0	0.30	89.9	10.1	54.7	2M	9.14	9.15	
371020	PB1-83-WW-12		6/SWM	62.0	69.0	0.34	87.5	10.4	56.1	2M	9.05	9.09	
371021	PB1-83-WW-35		SWM	61.2	70.5	0.35	88.4	10.1	53.9	2M	8.87	8.89	Q-CODI
371022	PB1-83-WW-41		5/SWM	59.6	70.3	0.32	90.3	10.4	54.1	1M	9.12	9.17	
371023	PB1-83-WW-53		5/SWM	58.8	70.8	0.31	91.5	9.8	55.5	2M	9.20	9.18	
371024	PB1-83-WW-56		5/SWM	58.0	75.9	0.32	97.5	9.6	53.4	2M	9.06	9.02	Outstanding Milling
371025	PB1-83-WW-57		5/SWM	61.6	72.3	0.34	91.3	9.7	53.4	2M	9.17	9.14	
371026	PB1-83-WW-58		5/SWM	62.4	73.0	0.36	90.9	10.0	53.1	2M	9.26	9.26	
371027	PB1-83-WW-59		5/SWM	61.2	71.2	0.37	88.0	9.6	54.0	2M	9.26	9.22	
371028	PB1-83-WW-99		6/SWM	60.8	69.2	0.36	86.0	10.2	54.3	2M	9.19	9.21	
371029	PB1-83-WW-134		6/SWM	63.2	69.9	0.31	90.1	10.0	53.1	1M	9.12	9.12	
371030	PB1-83-WW-176		5/SWM	61.6	72.2	0.32	92.7	10.3	53.7	2M	9.26	9.30	
371031	PB1-83-WW-184		6/SWM	61.2	71.0	0.35	89.5	10.0	53.1	2M	8.99	8.99	
371032	PB1-83-WW-186		6/SWM	61.2	69.7	0.34	88.1	9.8	54.5	2M	9.10	9.08	
371033	PB1-83-WW-191		6/SWM	59.2	72.4	0.35	91.0	10.5	54.5	2M	9.02	9.08	
371034	PB1-83-WW-196		6/SWM	61.6	70.0	0.32	89.6	9.9	54.7	2M	9.17	9.16	
371035	PB1-85-WW-1		5/SWM	61.6	71.6	0.31	92.6	10.3	54.3	2M	9.26	9.30	
371036	PB1-85-WW-5		5/SWM	61.6	73.1	0.31	94.6	9.6	54.8	2M	9.29	9.24	
371037	PB1-85-WW-6		6/SWM	62.8	71.1	0.32	91.5	10.4	54.1	3M	9.05	9.09	
371038	PB1-85-WW-9		SWM	58.0	68.2	0.34	86.2	9.9	55.2	3M	8.82	8.81	Q-FYELD

1/ Observed Values Corrected to 14% Moisture Basis.

2/ Absorption at 14% Moisture Corrected to 10% Protein.

4/ Observed Values Corrected to 10% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: Most all of these selections are acceptable in overall quality. Several are significantly better in milling and/or baking than Stephens and Daws (as footnoted).

*370000 is the second part of the 1987 crop.

USDA, SEA AR
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PULLMAN, WA.

NURSCO 120

CHINESE COMMERCIAL FLOURS

CHINA

LABNUM	VARIETY	IDNO	CLASS	FASH	NIR Hardness	FPROT	MABSC	MTYPE	BABS	BABSC
371039 BAI YU LAN DAI 371040 "RED ROSE"			SWW SWW	0.52 0.54	41 59	8.3 11.1	60.4 61.0	6L 7M	59.9 64.3	61.6 63.2
LABNUM	VARIETY	IDNO	CLASS	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	RMKS
371039 BAI YU LAN DAI 371040 "RED ROSE"			SWW SWW	3.6 3.4	600 670	702 604	9 9	8.25 7.92	8.06 8.05	

COMMENTS: These two flours were obtained at the Nan Fang Flour Mills in Guangzhou, PRC. They represent two of their popular flours. By our standards, these wheat flours were poor in both bread and cookie baking.

NURSCO 121

LABNUM	VARIETY	IDNO	CLASS	TWT lb/bu	WMIST	WPROT	FYELD %	FASH %	MSCOR	FPROT %	MABS	FABS
371041 819		11-18	SWW	62.1	10.4	9.9	72.5	0.40	83.4	8.9	55.2	55.1
371042 820		11-18	SWW	62.0	10.4	9.8	72.7	0.40	83.3	8.6	53.2	54.7
371043 2271		11-6	SWW	61.4	10.3	10.1	72.0	0.40	82.5	8.7	53.9	55.3
371044 2272		11-10	SWW	61.9	9.9	9.7	71.1	0.39	83.1	8.8	54.1	55.3
371045 2273		11-12	SWW	61.1	9.9	9.8	68.3	0.40	76.3	8.5	51.5	53.5
371046 2426		11-11	SWW	61.5	10.4	10.1	70.8	0.42	79.4	8.7	53.5	54.9
371047 2427		11-11	SWW	62.1	9.7	9.7	69.7	0.42	78.3	9.1	52.9	54.9
371048 2428		11-12	SWW	60.4	10.7	10.5	72.7	0.44	80.2	9.3	53.1	52.6
371049 2429		11-13	SWW	61.3	10.5	9.3	69.1	0.38	78.9	7.9	53.3	53.5
371050 2430		11-13	SWW	61.8	10.0	9.9	70.4	0.39	79.5	9.0	52.5	52.8
371051 2431		11-13	SWW	61.5	10.0	10.4	70.0	0.40	78.7	8.8	54.0	53.2
371052 4701		11-10	SWW	61.1	10.9	10.1	68.0	0.38	75.5	8.9	54.8	54.0
371053 4702		11-12	SWW	61.1	11.0	10.1	69.0	0.39	76.6	8.3	54.9	53.4
371054 4703		11-13	SWW	61.7	9.8	10.7	68.8	0.38	77.8	9.0	54.8	56.1
371055 5508		11-14	SWW	61.2	10.8	9.9	68.6	0.38	77.3	8.8	54.7	55.3
371056 5190		11-20	SWW	61.9	9.8	10.2	67.9	0.40	74.5	8.8	54.1	56.2
371057 5511		11-18	SWW	61.0	10.2	10.2	70.2	0.39	77.7	9.2	54.7	55.5
371058 5514		11-21	SWW	61.8	10.2	10.6	70.7	0.39	77.6	9.4	54.1	55.6
371059 2438		11-21	SWW	60.3	10.5	10.3	68.7	0.39	75.3	9.1	55.3	55.6
371060 2441		11-23	SWW	61.3	10.2	10.6	72.4	0.41	81.2	9.6	55.1	54.3
371061 2443		11-24	SWW	60.9	10.2	10.2	72.2	0.42	79.7	9.2	55.3	55.1
371062 3940		11-27	SWW	61.1	10.0	10.7	71.1	0.40	80.2	9.1	54.6	55.4
371063 5516		11-29	SWW	61.9	10.1	10.4	72.0	0.40	82.7	9.0	54.3	56.3
371064 811		12-4	SWW	61.8	10.2	10.3	72.5	0.40	83.2	8.5	53.5	56.0
371065 813		12-4	SWW	61.9	10.6	10.7	73.0	0.40	83.6	9.2	54.5	56.3
371066 3941		11-30	SWW	61.8	10.2	9.9	72.7	0.41	82.9	8.4	54.5	55.0
371067 2445		12-2	SWW	61.6	10.5	10.5	73.6	0.40	84.7	8.7	55.5	56.2
371068 4705		11-28	SWW	60.9	10.2	9.8	73.2	0.40	83.3	8.7	55.5	55.3
371069 2275		12-3	SWW	61.2	10.3	10.2	72.9	0.41	83.2	8.8	55.0	56.2
371070 5601		12-4	SWW	61.6	10.4	10.2	72.2	0.40	82.6	8.5	54.9	56.1
371071 2278		12-7	SWW	61.6	10.4	10.1	70.7	0.38	79.5	8.9	57.5	56.1
371072 2279		12-8	SWW	62.1	10.1	9.9	69.9	0.37	79.5	9.2	56.4	55.9
371073 3946		12-9	SWW	61.4	10.6	10.5	70.0	0.38	79.1	9.2	56.3	54.3
371074 5606		12-8	SWW	60.1	9.9	10.9	68.7	0.40	76.2	9.3	56.8	55.8
371075 5607		12-8	SWW	61.8	10.2	10.0	70.0	0.37	80.8	8.5	55.8	55.1

NURSCO 121

LABNUM	VARIETY	IDNO	CLASS	FPEAK	FSTAB Min.	CODI	CAVOL cc	SCSOR	WTIN %	NOSCO	WFN	WDSI
371041 819		11-18	SWW	2.0	3.9	8.70	1290	76.0	345	79	377	.079
371042 820		11-18	SWW	1.6	2.9	8.86	1285	75.0	365	79	405	.106
371043 2271		11-6	SWW	2.6	3.6	8.60	1270	74.0	346	79	349	.198
371044 2272		11-10	SWW	1.7	3.7	9.11	1290	78.0	337	77	368	.092
371045 2273		11-12	SWW	1.5	3.2	8.80	1245	72.0	333	75	374	.070
371046 2426		11-11	SWW	1.5	3.7	8.86	1260	74.0	329	77	349	.087
371047 2427		11-11	SWW	2.6	3.3	9.00	1200	67.0	347	78	361	.080
371048 2428		11-12	SWW	2.0	4.6	8.74	1255	73.0	337	76	371	.080
371049 2429		11-13	SWW	1.4	4.9	8.95	1250	73.0	333	76	386	.075
371050 2430		11-13	SWW	2.2	5.0	8.90	1215	69.0	340	76	451	.069
371051 2431		11-13	SWW	2.0	4.5	8.87	1245	71.0	333	75	451	.079
371052 4701		11-10	SWW	1.8	4.2	8.82	1280	75.0	342	77	378	.067
371053 4702		11-12	SWW	1.8	4.5	8.87	1275	74.0	340	77	344	.169
371054 4703		11-13	SWW	3.7	5.2	8.74	1245	71.0	337	77	399	.138
371055 5508		11-14	SWW	1.8	4.6	9.01	1240	71.0	333	77	319	.089
371056 5190		11-20	SWW	1.4	2.3	8.97	1240	72.0	347	81	347	.080
371057 5511		11-18	SWW	1.5	3.8	8.97	1260	73.0	343	77	314	.087
371058 5514		11-21	SWW	3.0	4.4	8.89	1270	75.0	338	75	485	.073
371059 2438		11-21	SWW	3.3	4.1	8.95	1245	72.0	359	75	383	.163
371060 2441		11-23	SWW	2.5	4.4	8.89	1190	68.0	347	75	386	.074
371061 2443		11-24	SWW	1.7	3.4	8.79	1245	70.0	351	75	353	.104
371062 3940		11-27	SWW	2.6	4.6	8.76	1280	73.0	323	75	361	.104
371063 5516		11-29	SWW	1.8	4.0	8.79	1300	73.0	342	76	366	.166
371064 811		12-4	SWW	3.1	3.9	8.76	1285	72.0	353	75	350	.135
371065 813		12-4	SWW	2.8	3.6	8.75	1250	72.0	348	75	349	.080
371066 3941		11-30	SWW	1.6	3.8	8.85	1245	72.0	350	76	442	.106
371067 2445		12-2	SWW	1.6	2.1	8.80	1290	77.0	359	75	331	.142
371068 4705		11-28	SWW	2.1	2.7	8.82	1270	74.0	333	74	387	.071
371069 2275		12-3	SWW	1.7	3.0	8.65	1235	73.0	343	77	327	.077
371070 5601		12-4	SWW	1.8	3.2	9.01	1275	74.0	336	75	366	.240
371071 2278		12-7	SWW	2.8	5.8	8.79	1245	73.0	344	76	373	.102
371072 2279		12-8	SWW	2.8	4.7	8.87	1260	75.0	348	76	381	.116
371073 3946		12-9	SWW	2.8	5.2	8.96	1245	72.0	331	74	412	.080
371074 5606		12-8	SWW	1.8	3.5	8.70	1230	73.0	352	74	330	.361
371075 5607		12-8	SWW	1.9	3.2	9.07	1240	73.0	350	75	362	.250

NURSCO 121

LABNUM	VARIETY	IDNO	CLASS	TWT lb/bu	WMIST	WPROT	FYELD %	FASH %	MSCOR	FPROT %	MABS	FABS
371076 3947		12-10	SWW	61.3	10.4	9.5	69.8	0.37	78.9	8.4	54.9	53.9
371077 4707		12-8	SWW	61.5	10.2	9.8	69.2	0.38	77.3	8.6	54.8	53.8
371078 4708		12-10	SWW	61.6	10.6	10.0	69.7	0.37	79.7	8.8	54.9	54.5
371079 799		12-29	SWW	62.1	10.5	9.7	70.0	0.37	79.0	8.5	55.6	54.8
371080 2280		12-10	SWW	61.9	10.1	10.4	70.4	0.38	79.8	9.0	56.1	54.5
371081 5613		12-11	SWW	60.5	10.6	10.3	70.4	0.37	79.8	8.8	54.7	53.7
371082 800		12-28	SWW	62.0	10.5	10.3	70.4	0.40	78.6	9.0	56.4	53.7
371083 4710		12-14	SWW	61.6	10.4	10.1	70.7	0.40	78.3	8.3	53.6	53.2
371084 2281		12-15	SWW	62.4	10.3	10.2	71.1	0.40	80.3	8.8	55.6	53.8
371085 5623		12-14	SWW	61.0	10.2	9.9	71.1	0.42	77.8	8.1	55.4	52.6
371086 5625		12-18	SWW	61.7	10.3	9.9	72.0	0.40	79.3	8.1	53.7	53.7
371087 5626		12-15	SWW	60.7	10.7	9.9	70.6	0.40	80.3	8.7	54.1	52.3
371088 4709		12-17	SWW	60.7	10.9	9.9	72.8	0.39	81.4	8.7	55.3	53.9
371089 4713		12-17	SWW	60.2	11.3	10.6	70.6	0.39	79.5	9.0	55.4	53.6
371090 5628		12-13	SWW	60.8	10.8	10.1	71.8	0.42	78.9	8.8	55.4	53.7
371091 5629		12-18	SWW	61.8	10.2	9.3	70.2	0.40	79.3	8.8	55.3	53.1
371092 5630		12-18	SWW	61.2	9.8	9.8	70.6	0.38	79.9	8.6	55.1	52.9
371093 5632		12-19	SWW	61.0	10.0	9.7	71.2	0.40	80.3	8.3	54.5	52.8
371094 4714		12-18	SWW	61.0	10.9	10.4	70.7	0.39	78.9	8.8	55.0	53.6
371095 4715		12-21	SWW	60.5	10.7	10.1	70.6	0.39	80.3	8.6	53.9	54.4

NURSCO 121

LABNUM	VARIETY	IDNO	CLASS	FPEAK	FSTAB	CODI	CAVOL	SCSOR	WTIN	NOSCO	WFN	WDSI		
													cc	%
371076 3947		12-10	SWW	1.5	3.8	9.02	1250	74.0	343	74	380	.122		
371077 4707		12-8	SWW	1.9	3.5	9.12	1255	76.0	346	75	415	.085		
371078 4708		12-10	SWW	1.6	3.3	9.12	1245	74.0	340	74	439	.093		
371079 799		12-29	SWW	1.2	3.0	8.97	1260	72.0	358	76	359	.107		
371080 2280		12-10	SWW	2.0	3.7	8.99	1215	66.0	342	76	414	.092		
371081 5613		12-11	SWW	1.6	3.6	9.15	1295	76.0	339	75	351	.170		
371082 800		12-28	SWW	2.3	4.1	9.02	1250	70.0	344	74	409	.106		
371083 4710		12-14	SWW	1.3	4.2	9.02	1275	72.0	332	75	406	.096		
371084 2281		12-15	SWW	1.7	3.8	8.99	1285	75.0	351	78	442	.117		
371085 5623		12-14	SWW	1.5	4.0	8.99	1240	68.0	340	75	335	.174		
371086 5625		12-18	SWW	1.6	2.5	8.89	1230	70.0	340	75	367	.107		
371087 5626		12-15	SWW	1.7	3.6	9.02	1225	67.0	342	77	313	.137		
371088 4709		12-17	SWW	1.3	2.8	9.10	1255	71.0	343	76	386	.108		
371089 4713		12-17	SWW	1.4	3.7	8.92	1255	74.0	341	76	370	.095		
371090 5628		12-13	SWW	1.6	3.0	9.10	1200	65.0	329	75	438	.108		
371091 5629		12-18	SWW	1.7	4.5	9.06	1230	71.0	337	75	327	.183		
371092 5630		12-18	SWW	1.7	4.0	9.01	1275	73.0	334	75	449	.078		
371093 5632		12-19	SWW	1.6	3.0	9.07	1240	71.0	330	75	296	.099		
371094 4714		12-18	SWW	2.0	3.6	8.84	1245	72.0	342	76	389	.120		
371095 4715		12-21	SWW	1.9	2.8	9.16	1250	72.0	335	75	394	.125		

COMMENTS: These analyses were made in cooperation with U.S. Wheat Associates in their on-going project to follow wheat quality of export cargos through-out the marketing year. Cargos analyzed in this group were loaded from Nov. 18 through Dec. 21/87. Procedures used were standard methods previously reported. In general, small variation was observed in the quality factors measured. A series of these collected from 11/12 through 11/21 were notably poorer in milling quality than previous samples or others within this group.

SAS

N Obs	Variable	N	Minimum	Maximum	Mean	Std Dev
55	TWT	55	60.200	62.400	61.195	1.440
	WMIST	55	9.700	11.300	10.344	0.340
	WPROT	55	9.300	10.900	10.111	0.350
	FYELD	55	67.900	73.600	70.767	1.446
	FASH	55	0.370	0.440	0.395	0.015
	MSCOR	55	74.500	84.700	79.744	2.335
	FPRDT	55	7.900	9.600	8.778	0.352
	MABS	55	51.500	57.500	54.689	1.095
	FABS	55	52.300	56.300	54.535	1.158
	FPEAK	55	1.200	3.700	1.962	0.559
	FSTAB	55	2.100	5.800	3.782	0.766
	CODI	55	8.600	9.120	8.989	0.572
	CAVOL	55	1190.000	1300.000	1253.091	24.466
	SCSOR	55	65.000	78.000	72.327	2.667
	WTIN	55	323.000	365.000	341.855	8.429
	NOSCO	55	74.000	81.000	75.873	1.454
	WFN	55	296.000	485.000	377.564	40.552
	WDSI	55	0.067	0.361	0.117	0.053

NURSCO 122

ABERDEEN, ID

D.D. KASARDA

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
*371096	RED RIVER 68 NO N	CI014193	HRS	62.4	70.5	0.45	82.3	12.5	69.9	6H
371097	RED RIVER 68 HIGH N	CI014193	HRS	61.8	70.6	0.46	82.3	13.0	69.5	6H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
371096	RED RIVER 68 NO N	CI014193	HRS	71.1	71.6	6.7	980	1011	1	
371097	RED RIVER 68 HIGH N	CI014193	HRS	70.6	70.6	6.5	1025	1025	2	

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 13% Protein.4/ Observed Values Corrected to 13% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

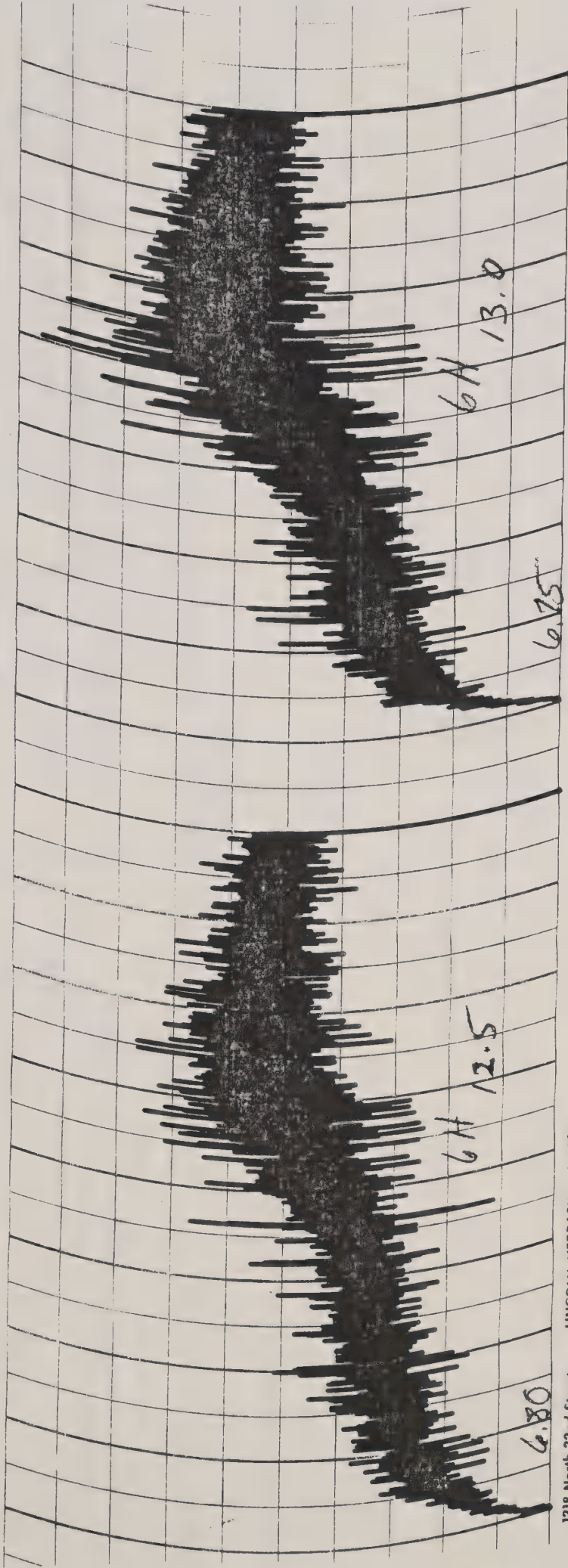
COMMENTS: These analysis of two biotypes of Red River 68 were run in cooperation with D.D.Kasarda, USDA, ARS, WRRRC, Albany, CA. Data indicate they are very similar in both milling and baking properties, but not as long and strong in dough properties as older traditional Red Rivers (see page 2 for mixograms).

*370000 is the second part of the 1987 crop.

Chart No. NMC 2310

Chart No. NMC 2310

Printed in U.S.A.



1218 North 22nd Street
LINCOLN, NEBRASKA 68503

NATIONAL MANUFACTURING CO.

1218 North 22nd Street

LINCOLN, NEBRASKA 68503

371046

-1097

NURSCO 123

BOZEMAN, MT

C.F. MCGUIRE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	BABS
*371098		MT7811	HW	60.4	70.4	0.30	86.4	12.7	67.0	5H	67.4
LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	RMKS
371098		MT7811	HW	67.7	4.3	945	964	4	8.06	8.04	
<u>1/</u> Observed Values Corrected to 14% Moisture Basis.											
<u>3/</u> Absorption at 14% Moisture Corrected to 13% Protein.											
<u>4/</u> Observed Values Corrected to 13% Protein.											

5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS: Flour yield was not high, but probably acceptable at the low ash level. Very good dough mixing and absorption properties. Crumb structure of the bread was slightly heavy and was scored questionable.

*370000 is the second set of the 1987 crop.

NURSCO 124

MI,WA

LABNUM	VARIETY	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	Cookie TGS*	CODI
371109	TYLER --PULLMAN--	SRW	61.4		0.32		10.4	60.3	2M	4	8.99
371100	AUBURN	SRW	62.4		0.32		10.5	59.8	4M	5	9.12
371101	FRANKENMUTH	SRW	63.0		0.35		10.1	58.3	2M	7	9.05
371102	2550	SRW	62.8		0.32		9.6	58.8	2M	5	9.29
371103	ARTHUR	SRW	61.5		0.37		11.8	59.2	3M	4	8.84
371104	HILLSDALE	SRW	62.3		0.30		10.5	59.9	2M	5	9.26
371105	CALDWELL	SRW	61.9		0.30		8.8	57.0	4L	7	9.35
371106	CARDINAL	SRW	63.1		0.31		10.3	60.1	2M	4	9.07
371107	AUGUSTA	SRW	61.9		0.34		9.5	57.5	2M	5	9.15
371108	HILL 81	SRW	64.1		0.34		10.2	60.3	2M	5	9.10
371109	CREW	CLUB	62.2		0.34		9.5	55.3	1M	7	9.37
371110	STEPHENS	SRW	62.3		0.34		10.1	56.9	2M	5	9.25
371111	DAWS	SRW	64.1		0.33		9.7	56.3	3L	5	8.81
371112	NUGAINES	SRW	64.5		0.30		9.6	58.0	4M	4	9.04
371113	LEWJAIN	SRW	64.0		0.31		10.0	58.7	4M	5	9.26
371114	TRES	CLUB	63.6		0.33		9.9	54.6	1M	5	9.29
371115	TYLER --WALLA WALLA--	SRW	60.4		0.32		9.9	57.6	2M	4	8.91
371116	AUBURN	SRW	62.7		0.42		10.5	55.8	1M	5	9.21
371117	FRANKENMUTH	SRW	61.8		0.37		10.3	57.0	2M	7	9.34
371118	2550	SRW	62.8		0.36		9.3	55.6	1M	6	9.20
371119	ARTHUR	SRW	62.4		0.40		12.1	58.4	2M	4	9.01
371120	HILLSDALE	SRW	61.0		0.33		10.3	59.6	3M	6	9.19
371121	CALDWELL	SRW	63.8		0.33		9.0	55.9	3L	5	9.10
371122	CARDINAL	SRW	61.2		0.33		9.6	57.1	2M	6	9.12
371123	AUGUSTA	SRW	59.8		0.38		9.5	54.0	2M	7	9.29
371124	HILL 81	SRW	61.0		0.41		10.5	55.9	2M	5	9.20
371125	CREW	CLUB	61.1		0.39		9.7	53.2	2M	7	9.29
371126	STEPHENS	SRW	59.4		0.41		10.5	51.9	2M	5	9.11
371127	DAWS	SRW	61.2		0.40		9.9	53.5	3M	4	8.87
371128	NUGAINES	SRW	61.7		0.38		9.8	56.1	3M	4	9.11
371129	LEWJAIN	SRW	60.0		0.39		9.9	56.3	3M	3	9.09
371130	TYLER --MICHIGAN--	SRW	57.7		0.37		9.0	57.8	4L	5	9.17
371131	AUBURN	SRW	59.7		0.37		9.8	56.5	6L	8	9.39
371132	FRANKENMUTH	SRW	57.4		0.42		8.5	56.2	2L	7	9.41
371133	2550	SRW	57.3		0.38		9.4	54.9	3L	5	9.30

MI, WA

NURSCO 124

LABNUM	VARIETY	HARDNESS Flour	CLASS	CODIC	CAVOL	SCSOR	WTIN	NOSCO	VISC	VISCC	RMKS
3711099	TYLER --PULLMAN--	49.1	SRW	9.03	1245	69.0	350	72	170	158	
3711100	AUBURN	40.5	SRW	9.18	1210	65.0	321	70	184	167	
3711101	FRANKENMUTH	46.2	SRW	9.06	1180	64.0	335	72	120	118	
3711102	2550	37.8	SRW	9.24	1195	67.0	334	74	137	149	
3711103	ARTHUR	43.3	SRW	9.04	1110	57.0	329	67	175	129	
3711104	HILLSDALE	48.2	SRW	9.31	1095	56.0	331	71	146	133	
3711105	CALDWELL	36.0	SRW	9.22	1165	63.0	321	75	133	175	
3711106	CARDINAL	46.1	SRW	9.11	1165	63.0	338	72	124	117	
3711107	AUGUSTA	50.1	SRW	9.09	1125	60.0	330	74	98	108	
3711108	HILL 81	50.4	SRW	9.12	1105	59.0	340	72	145	140	
3711109	CREW	50.1	CLUB	9.34	1175	63.0	355	76	94	104	
3711110	STEPHENS	48.1	SRW	9.26	1125	60.0	334	72	103	102	
3711111	DAWS	45.9	SRW	8.78	1200	65.0	344	74	153	162	
3711112	NUGAINES	38.2	SRW	8.99	1215	67.0	315	71	153	166	
3711113	LEWJAIN	39.4	SRW	9.26	1225	68.0	327	71	109	109	
3711114	TRES	49.4	CLUB	9.28	1195	67.0	346	74	61	62	
3711115	TYLER --WALLA WALLA--	45.4	SRW	8.90	1240	70.0	340	69	101	103	
3711116	AUBURN	50.4	SRW	9.27	1210	69.0	339	70	94	86	
3711117	FRANKENMUTH	47.7	SRW	9.37	1205	68.0	347	72	77	73	
3711118	2550	41.6	SRW	9.12	1215	69.0	346	73	60	69	
3711119	ARTHUR	46.5	SRW	9.24	1205	66.0	340	68	148	105	
3711120	HILLSDALE	43.9	SRW	9.22	1220	68.0	343	68	137	129	
3711121	CALDWELL	45.6	SRW	8.99	1245	71.0	339	74	108	134	
3711122	CARDINAL	45.5	SRW	9.08	1155	63.0	362	73	73	79	
3711123	AUGUSTA	50.8	SRW	9.23	1170	65.0	350	76	69	76	
3711124	HILL 81	51.4	SRW	9.25	1190	66.0	348	71	96	88	
3711125	CREW	48.7	CLUB	9.27	1230	70.0	355	75	68	72	
3711126	STEPHENS	50.1	SRW	9.17	1135	62.0	347	71	70	64	
3711127	DAWS	45.9	SRW	8.86	1315	76.0	360	74	124	127	
3711128	NUGAINES	40.0	SRW	9.09	1265	70.0	339	72	123	128	
3711129	LEWJAIN	37.5	SRW	9.08	1300	72.0	347	73	111	113	
3711130	TYLER --MICHIGAN--	34.3	SRW	9.06	1380	80.0	354	70	108	134	
3711131	AUBURN	37.1	SRW	9.37	1355	83.0	351	68	99	103	
3711132	FRANKENMUTH	30.9	SRW	9.25	1255	74.0	358	75	55	78	
3711133	2550	26.5	SRW	9.23	1305	77.0	357	70	95	108	

NURSCO 124

MI, WA

LABNUM	VARIETY	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE Cookie TGS*	COD I
371134	ARTHUR	SRW	59.4		0.39		9.4	57.0	4L	6
371135	HILLSDALE	SRW	58.3		0.40		9.1	52.2	2L	9
371136	CALDWELL	SRW	57.8		0.37		8.9	55.6	8L	9
371137	CARDINAL	SRW	58.0		0.35		8.7	54.7	3L	8
371138	AUGUSTA	SWW	54.7		0.42		8.5	55.4	3L	8
371139	HILL 81	SWW	59.7		0.45		10.1	55.1	2M	7
371140	CREW	CLUB	59.8		0.45		9.8	52.0	2M	8
371141	STEPHENS	SWW	61.6		0.49		9.8	50.6	2M	8
371142	DAWS	SWW	56.6		0.46		9.7	54.1	3M	6
371143	NUGAINES	SWW	61.2		0.48		9.8	54.2	3M	5
371144	LEWJAIN	SWW	57.2		0.47		10.6	57.7	4M	3

NURSCO 124

MI, WA

LABNUM	VARIETY	HARDNESS Flour	CLASS	CODIC	CAVOL	SCSOR	WTIN	NOSCO	VISC	VISCC	RMKS
371134	ARTHUR	37.3	SRW	9.21	1290	76.0	346	70	86	98	
371135	HILLSDALE	38.9	SRW	9.39	1275	73.0	352	59	57	68	
371136	CALDWELL	34.0	SRW	9.25	1295	73.0	350	72	67	85	
371137	CARDINAL	31.5	SRW	9.24	1250	72.0	352	73	74	99	
371138	AUGUSTA	34.0	SWW	9.23	1195	64.0	348	75	55	77	
371139	HILL 81	38.7	SWW	9.27					90	88	
371140	CREW	42.2	CLUB	9.35	1250	70.0			71	74	
371141	STEPHENS	39.0	SWW						64	66	
371142	DAWS	38.1	SWW	9.04	1410	85.0	350	70	108	115	
371143	NUGAINES	29.3	SWW	8.83					88	92	
371144	LEWJAIN	27.6	SWW	9.15	1320	77.0	347	68	108	96	

COMMENTS: This is a cooperative project with the USDA, ARS, Soft Wheat Quality Laboratory, Wooster, OH in an effort to compare and document similarities and/or differences between Eastern Soft Red Winter Wheat and PNW Soft White Wheats. Nine SRW and seven SWW varieties which represent the major part of the current commercial production in both areas were grown both in the WA and MI with the cooperation of R.E. Allan and E. Everson, respectively. The wheat samples were split and evaluated at both laboratories with tests routinely used to evaluate soft wheat cultivars. This group reports the findings of the sub-sample milled at the SWQL. See Nursco 083 for the physical/chemical and baking results of the sub-sample milled at the SWQL. The project will be repeated with the 1988 crop and the data combined and statistically treated.

* Cookie TGS = Top Grain Score (Scale of 1-10 with 10 the highest).

NURSCO 125

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						<u>1/</u>		<u>1/</u>	<u>3/</u>	
371145 HATTON		C1017772	HRW	61.4	69.3	0.40	79.7	14.3	67.0	3H
371146 WESTON		C1017727	HRW	61.0	69.3	0.40	80.7	14.4	69.1	3H
371147		WA7523	HRW	60.3	69.4	0.40	79.8	13.8	69.3	3H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
					<u>3/</u>			<u>4/</u>		
371145 HATTON		C1017772	HRW	67.0	66.7	3.3	995	976	2	
371146 WESTON		C1017727	HRW	69.2	68.8	2.5	1140	1115	3	
371147		WA7523	HRW	68.8	69.0	2.6	1060	1072	4 Q-BCRGR	

1/ Observed Values Corrected to 14% Moisture Basis.
3/ Absorption at 14% Moisture Corrected to 14% Protein.
4/ Observed Values Corrected to 14% Protein.

5/ Particularly Promising Overall Quality Characteristics.
6/ Promising Overall Quality Characteristics.

COMMENTS: WA7523 is poorer (questionable) in bread crumb structure than Hatton or Weston and intermediate in loaf volume. It appears about equal in flour milling properties.

NURSCO 126

IDAHO

W.K. POPE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/ 3/	MABSC	MTYPE	BABS
*371148	WESTON	CI017727	HRW	62.0	70.9	0.33	89.1	12.6	67.6	4H	70.9
371149	INC.8-L		SRW	59.4	66.3	0.40	80.3	10.6	61.0	3M	
371150	INC.8.5-L		HRW	63.5	72.2	0.39	87.5	11.2	64.8	4H	66.7
371151	INC.8-BF		SRW	58.1	64.8	0.39	78.8	10.0	61.2	3M	
371152	INC.8-BF 1-1		SRW	59.0	65.5	0.39	79.8	9.5	58.3	2M	
371153	WESTON BF 1-2	<u>6/</u>	HRW	62.2	72.8	0.35	90.2	11.1	65.4	3H	67.2
371154	WESTON BF 4-15		HRW	62.8	73.4	0.34	91.4	11.1	64.9	3H	66.7
371155	WESTON BF 6-10		HRW	62.4	73.8	0.33	92.4	11.4	64.6	3H	66.2
371156	WESTON BF 26-1		HRW	62.0	74.0	0.34	92.1	10.8	63.2	2H	64.2
371157	INC.9 BF 6-9		HRW	59.5	72.5	0.32	91.4	10.8	64.0	2H	65.0
371158	INC.9 BF 15-2		HRW	59.5	65.5	0.32	84.1	10.8			
371159	INC.9 BF 4-2		HRW	59.5	65.5	0.32	84.1	10.8			
371160	INC.6 BF 2-1		SRW	59.0	65.5	0.35	82.3	8.7	60.2	3M	58.6
371161	INC.5 BF 5-13/15		SRW	60.8	69.1	0.37	85.4	9.5	61.8	4M	61.0
371162	INC.8 CC		SRW	55.6	66.0	0.32	84.5	10.1	59.7	4M	60.0
371163	WESTON	CI017727	HRW	58.6	70.8	0.28	91.5	12.9	66.1	4H	69.7
371164	SEL.332 23-5 CC		HRW	62.0	70.9	0.30	90.5	9.0	61.2	6M	61.4
371165	SEL.333 23-6 CC		HRW	62.4	71.4	0.26	93.2	11.3	60.2	4H	62.2
371166	SEL.338 24-1 CC		HRW	62.4	70.9	0.30	91.0	10.7	59.3	4M	60.2
371167	MARRIS HIBIT/WESTON L		<u>6/</u> SRW	59.6	71.0	0.38	87.2	9.9	58.4	2M	
371168	KOPARA/WESTON L	CI017727	<u>6/</u> HRW	62.0	67.8	0.37	83.7	10.6	64.4	4M	65.2
371169	WESTON		HRW	65.6	73.3	0.35	90.7	11.0	67.8	4H	68.0
371170	TROY/WESTON BF		HRW	61.6	67.8	0.36	84.4	9.6	63.9	3M	63.7
371171	19/(A-5006) BF		SRW	58.4	68.1	0.39	82.7	8.4	51.7	4M	57.8
371172	()/A-5006//4VAR BF		HRW	60.0	68.2	0.34	85.8	9.9	60.6	2M	59.2
371173	82070 BF	<u>6/</u>	HRW	59.2	71.5	0.34	89.0	10.8	63.1	4M	63.6
371174	VAR30/19 BF		<u>6/</u> HRW	61.2	74.3	0.40	89.3	10.0	62.8	3M	62.5
371175	TROY/HHT3-COM BF		HRW	61.2	67.7	0.32	86.2	9.5	60.9	2M	59.6
371176	TROY/(1D2-159-5006) BF		SRW	59.6	68.6	0.41	82.3	9.2	57.9	3M	56.8
371177	TROY//55/19(A-5006) BF		HRW	60.0	67.6	0.38	83.1	9.9	61.0	3M	60.1
371178	TROY/82070 BF	<u>5/</u>	HRW	58.8	67.1	0.36	83.5	9.8	61.4	4M	60.4
371179	GREER/PECK/HILL CC		<u>5/</u> SWW	60.4	71.6	0.34	90.3	7.7	57.2	6L	
371180	GREER/PECK/HILL CC		<u>5/</u> SWW	60.0	71.9	0.31	92.8	7.9	54.2	3L	
371181	HILL/PECK CC		<u>5/</u> SWW	60.4	72.8	0.27	96.9	8.8	55.8	4M	
371182	WA6910 CC		<u>5/</u> SWW	60.0	70.7	0.30	91.9	8.6	54.7	3L	

1/ Observed Values Corrected to 14% Moisture Basis.

5/ Particularly Promising Overall Quality Characteristics.

3/ Absorption at 14% Moisture Corrected to 10% Protein.

6/ Promising Overall Quality Characteristics.

4/ Observed Values Corrected to 10% Protein.

*370000 is the second part of the 1987 crop.

NURSCO 126

IDAHO

W.K. POPE

LABNUM	VARIETY	IDNO	CLASS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	CODI	CODIC 4/	RMKS
371148	WESTON	C1017727	HRW	68.3	2.8	1035	874	2	8.92	8.99 "red-Soft" P-FYELD	
371149	INC.8-L		SRW							Q-LVOL	
371150	INC.8.5-L		HRW	65.5	2.6	870	796	2	9.24	9.24 P-FYELD	
371151	INC.8-BF		SRW						9.19	9.13 P-	
371152	INC.8-BF 1-1										
371153	WESTON BF 1-2		HRW	66.1	2.4	945	877	3			Q-MT,BCRGR&LVOL
371154	WESTON BF 4-15		HRW	65.6	2.2	900	832	4			Q-MT&LVOL
371155	WESTON BF 6-10		HRW	64.8	2.1	910	823	3			P-MT&BCRGR
371156	WESTON BF 26-1		HRW	63.4	1.9	880	830	8			P-MT, LVOL&BCRGR
371157	INC.9 BF 6-9		HRW	64.2	1.9	840	790	6			P-FYELD
371158	INC.9 BF 15-2		HRW								P-FYELD
371159	INC.9 BF 4-2		HRW								P-FYELD&BCRGR
371160	INC.6 BF 2-1		SRW	59.9	2.5	755	833	8	8.77	8.72 SR - Some Promise	
371161	INC.5 BF 5-13/15		SRW	61.5	2.4	680	710	8	8.95	8.96 P-FYELD	
371162	INC.8 CC			59.9	2.5	870	864	3			
371163	WESTON	C1017727	HRW	66.8	3.4	1005	825	2			P-LVOL&BCRGR
371164	SEL.332 23-5 CC		HRW	62.4	3.7	690	752	9			P-
371165	SEL.333 23-6 CC		HRW	60.9	3.0	840	759	8			"
371166	SEL.338 24-1 CC		HRW	59.5	2.5	720	677	9	9.12	9.11 Soft Red	
371167	MARRIS HIBIT/WESTON L		SRW								Q-FYELD
371168	KOPARA/WESTON L	C1017727	HRW	64.6	2.9	935	898	3			Q-FYELD&BCRGR
371169	WESTON		HRW	67.0	3.0	910	848	2			Q-FYELD (Soft Red)
371170	TROY/WESTON BF		HRW	64.1	2.3	830	855	4	9.20	9.02	P-FYELD,MT&BCRGR
371171	19/(A-5006) BF		SRW	59.4	3.4	810	906	7			Q-MT&BCRGR
371172	()/A-5006//4VAR BF		HRW	59.3	1.7	815	821	5			P-FYELD,MT&BCRGR
371173	82070 BF		HRW	62.8	2.9	880	830	2			Q-MT&BCRGR
371174	VAR30/19 BF		HRW	62.5	2.2	890	890	4			P-FYELD,MT&BCRGR
371175	TROY/HHT3-COM BF		HRW	60.1	1.5	790	821	8	8.84	8.75	Q-FYELD "Red"
371176	TROY/(1D2-159-5006) BF		SRW	57.6	2.6	695	743	7			P-FYELD,MT, LV&BCRGR
371177	TROY//55/19(A-5006) BF		HRW	60.2	2.1	750	756	8			P-
371178	TROY/82070 BF		HRW	60.6	2.2	745	757	8			"
371179	GREER/PECK/HILL CC		SWW						9.26	9.01	"
371180	GREER/PECK/HILL CC		SWW						9.31	9.08	"
371181	HILL/PECK CC		SWW						9.19	9.06	"
371182	WA6910 CC		SWW						9.17	9.02	"

NURSCO 126

IDAHO

W.K. POPE

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE	BABS
371183	HOFF-512 CC		5/ SWW	58.4	73.9	0.33	94.4	7.3	54.8	2L	
371184	MT3500 CC		SRW	59.2	67.2	0.30	87.7	8.6	60.8	6L	59.6
371185	MT3522 CC		HRW	56.6	68.1	0.27	89.4	9.6	59.7	8L	59.5
371186	KOPARA CC		6/ HRW	56.0	71.2	0.30	90.9	8.7	59.7	3L	58.6
371187	ALCEDO CC		HRW	61.6	70.9	0.26	92.7	10.5	59.4	8L	60.1
371188	SEL. INC. 9 CC		HRW	60.8	72.7	0.30	92.7	8.8	59.0	3L	58.5
371189	19/ID2 CC		6/ SRW	59.4	69.5	0.30	90.4	8.8	57.3	4L	56.8
371190	JOEL//MT3524/WESTON CC		6/ SRW	61.2	72.0	0.35	90.6	7.9	55.6	3L	54.7
371191	5/444-3 CC		6/ HRW	60.6	71.5	0.35	88.7	11.1	58.9	3H	60.7
371192	5/443-2 CC		6/ HRW	60.0	71.1	0.31	90.2	12.1	61.1	4H	63.9
371193	5/443-1 CC		6/ HRW	60.2	70.9	0.30	90.8	11.1	60.3	3H	62.1
371194	VAR30=A-5006 CC		HRW	59.8	71.3	0.30	91.1	9.5	59.5	8M	60.2
371195	5/451-1 CC		6/ HRW	60.8	72.8	0.30	92.8	10.0	61.5	6M	62.2
371196	5/456-1 CC		6/ HRW	57.4	70.7	0.30	90.6	10.2	61.7	8M	62.6

NURSCO 126

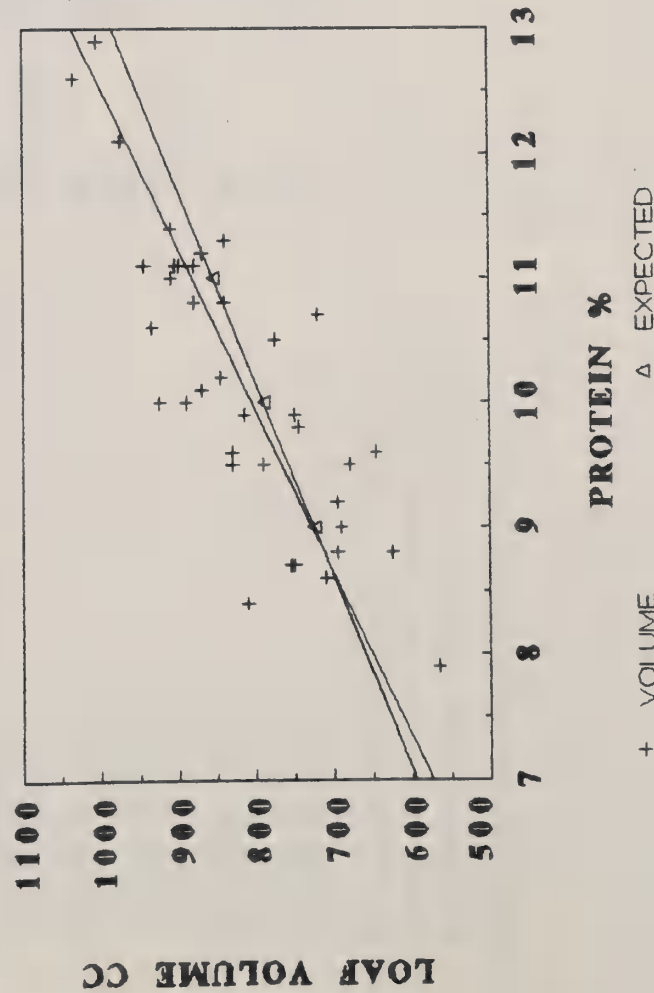
IDAHO

W.K. POPE

LABNUM	VARIETY	IDNO	CLASS	BABSC	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	RMKS
371183	HOFF-512 CC		SWW	61.0	3.5	710	794	9	9.30	9.00	Q-FYELD P-BCRGR(Soft)
371184	MT3500 CC		SRW	59.9	5.5	645	670	9			Q-FYELD P-LVOL&BCRGR
371185	MT3522 CC		HRW	59.9	3.2	750	831	5			Q- BCRGR
371186	KOPARA CC		HRW	59.6	4.5	775	744	8			P-LVOL&BCRGR
371187	ALCEDO CC										
371188	SEL. INC.9 CC		HRW	59.7	2.9	695	769	6			P-BCRGR
371189	19/1D2 CC		SRW	58.0	2.5	625	697	7	8.97	8.84"Soft Red"	
371190	JOEL//MT3524/WESTON CC		SRW	56.8	2.8	565	691	9	9.07	8.84"Soft Red"	
371191	5/444-3 CC		HRW	59.6	2.5	905	837	4			Q-BCRGR
371192	5/443-2 CC		HRW	61.8	2.5	975	845	4			Q-BCRGR
371193	5/443-1 CC		HRW	61.0	2.7	880	812	6			Q- "
371194	VAR30=A-5006 CC		HRW	60.7	4.7	830	861	6			Q- "
371195	5/451-1 CC		HRW	62.2	2.7	925	925	4			Q- "
371196	5/456-1 CC		HRW	62.4	4.0	845	833	3			Q-LVOL&BCRGR

COMMENTS: Please note that several of the red wheats are actually soft in endosperm and would fit the market class of SRW. There is a range of quality among these wheats in both milling and baking. A plot of the loaf volumes x flour protein indicate a near relationship, but some are poorer and others better in loaf volume than expected at their various protein levels. The soft white crosses appear to have good promise in both milling&baking quality.

LOAF VOLUME VS PROTEIN
CAMAS WHEAT BREEDING



NURSCO 127

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
						1/ 1/		1/ 3/		
* 371197 HATTON		C1017772	HRW	62.6	71.4	0.36	88.4	12.8	67.0	3H
371198 WA 7172		1	HRW	61.5	69.5	0.39	84.7	13.5	63.9	1H
371199 WA 7172		2	HRW	61.1	69.2	0.39	84.3	13.9	62.5	1H
371200 WA 7172		3	HRW	61.1	68.1	0.41	82.1	14.5	60.8	1H
371201 WA 7172		4	HRW	60.6	68.1	0.41	82.0	14.5	59.8	1H
371202 WA 7172		5	HRW	60.9	68.6	0.44	81.1	14.7	61.3	1H
371203 WA 7172		6	HRW	61.3	68.2	0.41	82.4	13.8	61.6	1H
371204 WA 7172		7	HRW	60.8	67.7	0.41	81.4	14.2	61.6	1H
371205 WA 7172		8	HRW	60.9	68.3	0.43	81.4	14.4	61.4	1H
371206 WA 7172		9	HRW	60.8	67.2	0.41	81.1	14.1	60.5	1H
371207 HATTON		C1017772	HRW	62.3	69.2	0.39	84.3	14.0	63.3	2H
371208 WA 7172		17	HRW	60.4	69.6	0.45	81.7	14.1	62.7	2H
371209 WA 7172		19	HRW	61.0	67.8	0.44	80.3	13.7	61.5	1H
371210 HATTON		C1017772	HRW	62.7	70.9	0.36	87.4	14.0	65.2	2H
371211 WA 7172		21	HRW	60.6	67.9	0.42	81.3	14.3	60.2	1H
371212 WA 7172		22	HRW	61.0	69.1	0.41	83.1	14.4	61.9	2H
371213 WA 7172		23	HRW	60.8	67.9	0.41	82.0	14.6	61.1	1H
371214 WA 7172		24	HRW	60.2	67.7	0.43	80.6	14.7	59.1	1H
371215 WA 7172		25	HRW	60.4	68.7	0.41	82.6	14.4	59.9	1H
371216 WA 7172		26	HRW	60.8	70.0	0.40	84.5	14.1	60.7	1H
371217 WA 7172		27	HRW	61.5	70.3	0.38	85.7	13.2	61.0	2H
371218 WA 7172		28	HRW	61.8	69.6	0.40	84.1	13.2	61.6	1H
371219 WA 7172		29	HRW	61.1	69.5	0.39	84.6	13.4	61.4	1H
371220 WA 7172		30	HRW	60.7	69.9	0.41	84.0	13.8	61.0	1H
371221 HATTON		C1017772	HRW	62.8	70.3	0.37	86.6	13.9	65.0	2H
371222 WA 7172		42	HRW	60.4	67.7	0.40	82.3	14.3	59.7	1H
371223 WA 7172		46	HRW	60.9	66.9	0.40	81.2	14.5	61.0	1H
371224 WA 7172		48	HRW	60.8	67.6	0.42	81.3	13.8	60.7	1H
371225 WA 7172		49	HRW	60.5	66.1	0.41	80.1	14.4	62.0	1H
371226 HATTON		C1017772	HRW	62.6	70.2	0.37	86.5	14.1	65.4	1H
371227 WA 7172		51	HRW	60.7	67.5	0.41	81.6	14.2	60.1	1H
371228 WA 7172		52	HRW	60.4	66.9	0.39	81.7	14.7	61.8	1H
371229 WA 7172		53	HRW	61.1	68.8	0.40	83.4	13.3	61.2	1H
371230 WA 7172		54	HRW	60.9	68.4	0.40	83.2	13.7	61.7	1H
371231 WA 7172		55	HRW	61.0	68.5	0.40	83.0	14.0	61.3	1H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Basis Corrected to 14% Protein.

4/ Observed Values Corrected to 14% Protein.

*370000 is the second part of the 1987 crop.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

NURSCO 127

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
371197 HATTON		C1017772	HRW							
371198 WA 7172		1	HRW							
371199 WA 7172		2	HRW							
371200 WA 7172		3	HRW							
371201 WA 7172		4	HRW							
371202 WA 7172		5	HRW							
371203 WA 7172		6	HRW							
371204 WA 7172		7	HRW							
371205 WA 7172		8	HRW							
371206 WA 7172		9	HRW							
371207 HATTON		C1017772	HRW	63.5	63.5	2.1	955	955	5	Q-MSCOR
371208 WA 7172		17	HRW	63.0	62.9	2.0	980	974	5	
371209 WA 7172		19	HRW							
371210 HATTON		C1017772	HRW	64.9	64.9	1.8	985	985	2	
371211 WA 7172		21	HRW	61.2	60.9	1.2	770	751	9	P-MT, LVOL, BCRGR&FYELD
371212 WA 7172		22	HRW	63.0	62.6	2.0	955	930	4	Q-LVOL&BCRGR
371213 WA 7172		23	HRW	62.4	61.8	1.3	830	793	8	P-FYELD, LVOL, BCRGR&MT
371214 WA 7172		24	HRW	60.5	59.8	1.3	850	807	8	P- " " "
371215 WA 7172		25	HRW	61.0	60.6	1.1	815	790	9	P- " " "
371216 WA 7172		26	HRW							
371217 WA 7172		27	HRW	60.4	61.2	1.8	895	945	4	Q-BCRGR&LVOL
371218 WA 7172		28	HRW							
371219 WA 7172		29	HRW							
371220 WA 7172		30	HRW							
371221 HATTON		C1017772	HRW							
371222 WA 7172		42	HRW							
371223 WA 7172		46	HRW							
371224 WA 7172		48	HRW							
371225 WA 7172		49	HRW							
371226 HATTON		C1017772	HRW	65.7	65.6	1.8	995	989	3	
371227 WA 7172		51	HRW							
371228 WA 7172		52	HRW							
371229 WA 7172		53	HRW							
371230 WA 7172		54	HRW							
371231 WA 7172		55	HRW	61.5	61.5	1.5	860	860	8	P-MT, LVOL&BCRGR

NURSCO 127

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
371232 WA 7172		56	HRW	60.8	69.3	0.39	84.2	14.0	61.4	1H
371233 WA 7172		57	HRW	60.8	68.8	0.42	82.4	14.3	61.2	1H
371234 WA 7172		58	HRW	60.6	67.8	0.40	82.2	14.7	61.0	1H
371235 WA 7172		59	HRW	60.6	67.4	0.41	81.4	14.4	60.8	1H
371236 WA 7172		60	HRW	60.8	66.8	0.40	81.2	14.3	61.4	1H
371237 HATTON		C1017772	HRW	62.7	70.4	0.37	86.6	13.9	65.3	2H
371238 WA 7172		61	HRW	60.8	67.7	0.39	82.5	14.0	60.0	1H
371239 WA 7172		62	HRW	58.6	68.2	0.42	81.8	13.2	59.1	1H
371240 WA 7172		63	HRW	60.3	66.7	0.43	79.8	14.1	60.9	1H
371241 WA 7172		65	HRW	61.1	69.0	0.41	82.8	13.7	61.0	1H
371242 WA 7172		66	HRW	61.5	69.2	0.40	83.8	14.2	61.6	1H
371243 HATTON		C1017772	HRW	62.9	70.3	0.36	86.9	14.1	62.7	2H
371244 WA 7172		72	HRW	60.6	68.0	0.43	81.2	14.1	60.4	1H
371245 WA 7172		74	HRW	60.9	69.2	0.41	83.1	14.0	61.4	1H
371246 WA 7172		75	HRW	60.7	67.9	0.41	81.8	13.8	60.7	1H
371247 WA 7172		76	HRW	60.6	67.8	0.43	81.0	14.5	60.4	1H

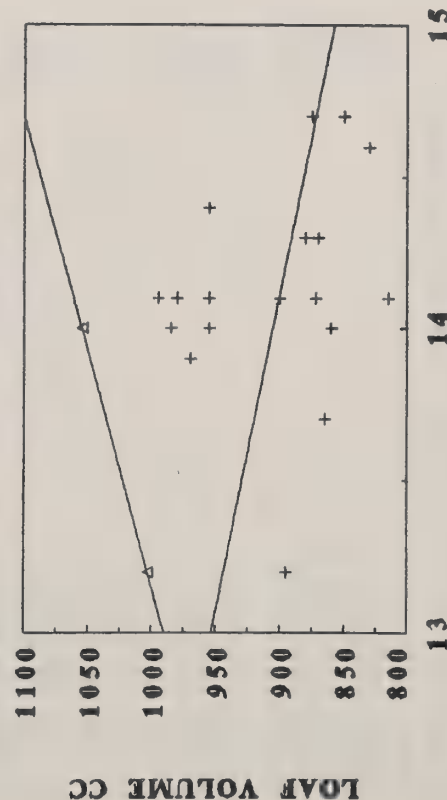
E. DONALDSON

LIND, WA

NURSCO 127

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
371232 WA 7172		56	HRW	61.7	61.4	1.5	880	861		8P-MT, LVOL&BCRGR
371233 WA 7172		57	HRW	61.9	61.2	1.5	875	832		9P-FYELD, MT, LVOL&BCRGR
371234 WA 7172		58	HRW							
371235 WA 7172		59	HRW	61.9	61.6	1.5	870	851		8P- " " "
371236 WA 7172		60	HRW							
371237 HATTON		C1017772	HRW	66.4	66.5	2.0	970	976	3	
371238 WA 7172		61	HRW							
371239 WA 7172		62	HRW							
371240 WA 7172		63	HRW	61.2	61.1	1.5	900	894		8P-FYELD, MT, LVOL&BCRGR
371241 WA 7172		65	HRW	60.9	61.2	1.4	865	884		8P-MT, LVOL&BCRGR
371242 WA 7172		66	HRW							
371243 HATTON		C1017772	HRW	63.0	62.9	2.1	955	949	4	
371244 WA 7172		72	HRW	60.7	60.6	1.4	872	866		
371245 WA 7172		74	HRW							
371246 WA 7172		75	HRW							
371247 WA 7172		76	HRW							

LOAF VOLUME VS PROTEIN
WA 7172 Sibling Trial



COMMENTS: None of the selections of WA7172 are acceptable in baking quality. About half of the samples were extremely weak in dough mixing properties and were not baked. These were characterized by short mixing times, low mixing tolerance, and poor volumes (see scattergram) and crumb grain structure. Most were not equal to Hatton in flour yeilds. Protein levels were excellent, but they do not perform as expected for 13-15% protein wheats.

NURSCO 128

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYIELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
*371248	HATTON	C1017772	HRW	62.7	70.4	0.36	86.9	14.0	65.9	2H
371249	WA 6817	1	HRW	59.6	69.1	0.35	86.1	14.2	65.6	2H
371250	WA 6817	2	HRW	58.4	67.5	0.36	84.0	15.0	65.4	3H
371251	WA 6817	3	HRW	59.7	68.0	0.34	85.9	14.9	66.0	3H
371252	WA 6817	4	HRW	60.1	68.9	0.33	86.9	14.3	65.1	3H
371253	WA 6817	5	HRW	58.3	60.4	0.35	77.3	12.9	61.7	3M
371254	WA 6817	6/6	HRW	61.1	70.8	0.34	88.7	13.6	65.3	3H
371255	WA 6817	7	HRW	60.4	69.6	0.33	87.9	14.0	66.4	3H
371256	WA 6817	8	HRW	59.5	68.7	0.35	86.1	14.8	66.1	2H
371257	WA 6817	10	HRW	60.3	68.8	0.33	87.0	14.6	64.8	2H
371258	HATTON	C1017772	HRW	62.9	69.6	0.35	87.0	14.0	66.8	2H
371259	WA 6817	11	HRW	58.9	66.7	0.36	83.3	14.3	65.4	2H
371260	WA 6817	6/12	HRW	58.7	68.8	0.35	86.2	13.8	65.7	2H
371261	WA 6817	13	HRW	58.5	68.1	0.36	84.9	14.4	63.8	3H
371262	WA 6817	14	HRW	59.3	68.2	0.36	84.9	14.6	66.6	3H
371263	WA 6817	6/15	HRW	59.8	69.2	0.35	86.3	13.9	65.6	4H
371264	WA 6817	6/16	HRW	60.5	71.1	0.36	87.9	14.1	65.3	2H
371265	HATTON	C1017772	HRW	62.7	69.9	0.35	87.1	13.9	66.1	2H
371266	WA 6817	6/22	HRW	59.7	69.5	0.34	87.4	14.3	65.2	3H
371267	WA 6817	23	HRW	59.8	69.7	0.36	86.5	14.0	65.4	3H
371268	WA 6817	24	HRW	59.3	68.1	0.36	84.8	14.5	65.3	3H
371269	WA 6817	25	HRW	57.8	66.8	0.37	82.6	14.7	66.3	3H
371270	WA 6817	26	HRW	59.5	67.5	0.38	83.3	14.2	65.7	2H
371271	WA 6817	27	HRW	59.4	68.2	0.36	84.6	13.9	67.0	4H
371272	WA 6817	28	HRW	58.2	67.3	0.34	85.0	14.5	65.2	3H
371273	WA 6817	30	HRW	59.3	68.2	0.37	84.1	14.8	65.7	3H
371274	HATTON	C1017772	HRW	63.1	70.4	0.36	87.1	13.5	65.4	2H
371275	WA 6817	6/31	HRW	60.1	68.4	0.34	86.0	14.0	65.9	2H
371276	WA 6817	6/32	HRW	60.3	68.9	0.33	86.9	13.4	67.0	4H
371277	WA 6817	6/33	HRW	59.0	68.7	0.36	85.1	12.9	66.8	4H
371278	WA 6817	6/34	HRW	60.3	69.8	0.35	87.2	14.3	65.5	3H
371279	WA 6817	35	HRW	59.1	68.0	0.34	85.7	14.5	65.5	2H
371280	WA 6817	36	HRW	59.2	68.1	0.35	85.3	14.7	65.3	2H
371281	WA 6817	37	HRW	59.6	67.9	0.35	85.0	14.9	65.5	2H
371282	WA 6817	38	HRW	59.6	68.4	0.35	85.5	14.1	65.9	3H

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 14% Protein.

4/ Observed Values Corrected to 14% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

*370000 is the second part of the 1987 crop.

NURSCO 128

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
371248 HATTON		C1017772	HRW	66.6	66.6	2.5	970	970	2	Q-LVOL&BCRGR
371249 WA 6817		1	HRW	67.5	67.3	2.8	925	913	4	Q-FYELD
371250 WA 6817		2	HRW	67.1	66.1	2.4	1005	943	3	Q-FYELD&BCRGR
371251 WA 6817		3	HRW	68.1	67.2	2.4	990	934	4	Q-LVOL&BCRGR
371252 WA 6817		4	HRW	66.1	65.8	2.6	900	881	3	Q-LVOL&BCRGR
371253 WA 6817		5	HRW	60.3	61.4	2.3	810	878	7	P-FYELD, LVOL&BCRGR
371254 WA 6817		6	HRW	65.6	66.0	2.6	900	925	2	
371255 WA 6817		7	HRW	67.1	67.1	2.8	915	915	3	
371256 WA 6817		8	HRW	67.1	66.3	2.3	940	890	2	P-LVOL
371257 WA 6817		10	HRW	65.6	65.0	2.1	885	848	4	P-MT, LVOL&BCRGR
371258 HATTON		C1017772	HRW	66.0	66.0	2.3	950	950	2	P-FYELD&LVOL
371259 WA 6817		11	HRW	65.9	65.6	2.4	915	896	2	Q-FYELD
371260 WA 6817		12	HRW	65.7	65.9	2.5	925	937	3	Q-FYELD&BCRGR
371261 WA 6817		13	HRW	64.4	64.0	2.5	935	910	2	Q-FYELD&LVOL
371262 WA 6817		14	HRW	66.4	65.8	2.6	940	903	4	Q-BCRGR
371263 WA 6817		15	HRW	66.2	66.3	3.2	980	986	3	Q-LVOL
371264 WA 6817		16	HRW	65.6	65.5	2.3	920	914	2	Q-LVOL
371265 HATTON		C1017772	HRW	66.2	66.3	2.1	975	981	2	Q-LVOL
371266 WA 6817		22	HRW	65.7	65.4	2.5	950	931	2	P-LVOL
371267 WA 6817		23	HRW	66.1	66.1	2.6	875	875	2	Q-FYELD, P-LVOL
371268 WA 6817		24	HRW	66.5	66.0	2.8	900	869	2	P-FYELD
371269 WA 6817		25	HRW	67.7	67.0	2.8	990	947	3	P-
371270 WA 6817		26	HRW	66.1	65.9	2.2	950	938	4	Q-FYELD&BCRGR
371271 WA 6817		27	HRW	67.1	67.2	2.8	935	941	3	P-FYELD, Q-BCRGR
371272 WA 6817		28	HRW	65.9	65.4	2.3	960	929	2	Q-FYELD, P-LVOL
371273 WA 6817		30	HRW	66.7	65.9	2.6	935	885	3	Q-MT&BCRGR
371274 HATTON		C1017772	HRW	65.1	65.6	2.3	960	991	4	Q-BCRGR
371275 WA 6817		31	HRW	66.1	66.1	3.1	1030	1030	3	Q-FYELD
371276 WA 6817		32	HRW	67.1	67.7	3.1	910	947	4	Q-FYELD, P-LVOL
371277 WA 6817		33	HRW	67.4	68.5	3.6	925	993	4	Q-
371278 WA 6817		34	HRW	66.5	66.2	2.4	965	946	3	Q-FYELD, P-LVOL
371279 WA 6817		35	HRW	66.2	65.7	2.2	915	884	4	Q-
371280 WA 6817		36	HRW	66.2	65.5	2.2	920	877	3	Q-
371281 WA 6817		37	HRW	66.6	65.7	2.2	925	869	4	Q-
371282 WA 6817		38	HRW	66.2	66.1	2.8	900	894	4	Q-

E. DONALDSON

LIND, WA

NURSCO 128

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1/	MABSC 3/	MTYPE
371283 WA 6817		39	HRW	58.8	66.9	0.35	83.9	13.4	66.4	3H
371284 WA 6817		40	HRW	58.5	66.7	0.33	84.8	14.3	65.5	2H
371285 HATTON		C1017772	HRW	63.3	70.0	0.34	87.7	13.8	66.6	3H
371286 WA 6817		41	HRW	58.7	68.3	0.37	84.6	14.3	65.4	3H
371287 WA 6817		42	HRW	59.9	68.6	0.35	85.7	14.1	67.1	3H
371288 WA 6817		43	HRW	59.2	69.4	0.35	86.8	13.7	66.2	3H
371289 WA 6817		44	HRW	59.9	68.8	0.36	85.6	14.4	67.3	3H
371290 WA 6817		47	HRW	58.3	68.2	0.37	84.1	14.4	66.3	3H
371291 WA 6817		48	HRW	58.7	68.9	0.36	85.7	14.1	66.4	3H
371292 WA 6817		49	HRW	59.7	68.3	0.35	85.3	14.7	66.6	3H
371293 WA 6817		50	HRW	59.7	69.2	0.34	86.7	14.1	65.6	4H
371294 HATTON		C1017772	HRW	62.7	69.3	0.34	87.1	13.5	67.9	3H
371295 WA 6817		6/51	HRW	58.7	67.2	0.35	84.2	14.3	66.2	4H
371296 WA 6817		6/52	HRW	57.7	66.1	0.38	81.5	14.7	67.0	3H
371297 WA 6817		6/53	HRW	58.6	67.0	0.32	85.7	13.7	67.1	3H
371298 WA 6817		6/54	HRW	59.5	67.8	0.34	85.4	13.8	66.4	4H
371299 WA 6817		6/55	HRW	57.9	66.9	0.35	84.2	14.3	67.6	4H
371300 WA 6817		56	HRW	59.0	68.4	0.35	85.7	14.4	65.9	3H
371301 WA 6817		6/57	HRW	59.0	67.6	0.36	84.1	14.2	66.2	3H
371302 WA 6817		58	HRW	58.6	67.8	0.35	84.9	14.6	65.9	3H
371303 WA 6817		59	HRW	58.8	67.5	0.34	85.2	14.4	67.1	4H
371304 WA 6817		6/60	HRW	59.8	70.2	0.32	88.7	14.2	65.7	3H
371305 HATTON		C1017772	HRW	63.2	70.6	0.33	88.9	12.8	66.5	3H
371306 WA 6817		61	HRW	59.2	67.0	0.34	84.8	14.6	66.1	3H
371307 WA 6817		6/62	HRW	59.3	69.8	0.33	87.9	14.7	66.3	3H
371308 WA 6817		6/63	HRW	59.6	69.1	0.35	86.1	14.7	66.4	3H
371309 WA 6817		64	HRW	59.6	69.1	0.35	86.3	14.9	64.8	2H
371310 WA 6817		6/65	HRW	58.7	69.1	0.36	86.0	14.2	65.3	3H
371311 WA 6817		66	HRW	59.2	68.6	0.37	84.9	14.3	66.2	3H
371312 WA 6817		67	HRW	57.8	66.9	0.33	84.9	14.0	66.5	3H
371313 WA 6817		68	HRW	59.5	68.5	0.36	85.3	14.5	66.5	3H
371314 WA 6817		6/69	HRW	57.9	67.1	0.34	84.6	14.4	67.1	3H

NURSCO 128

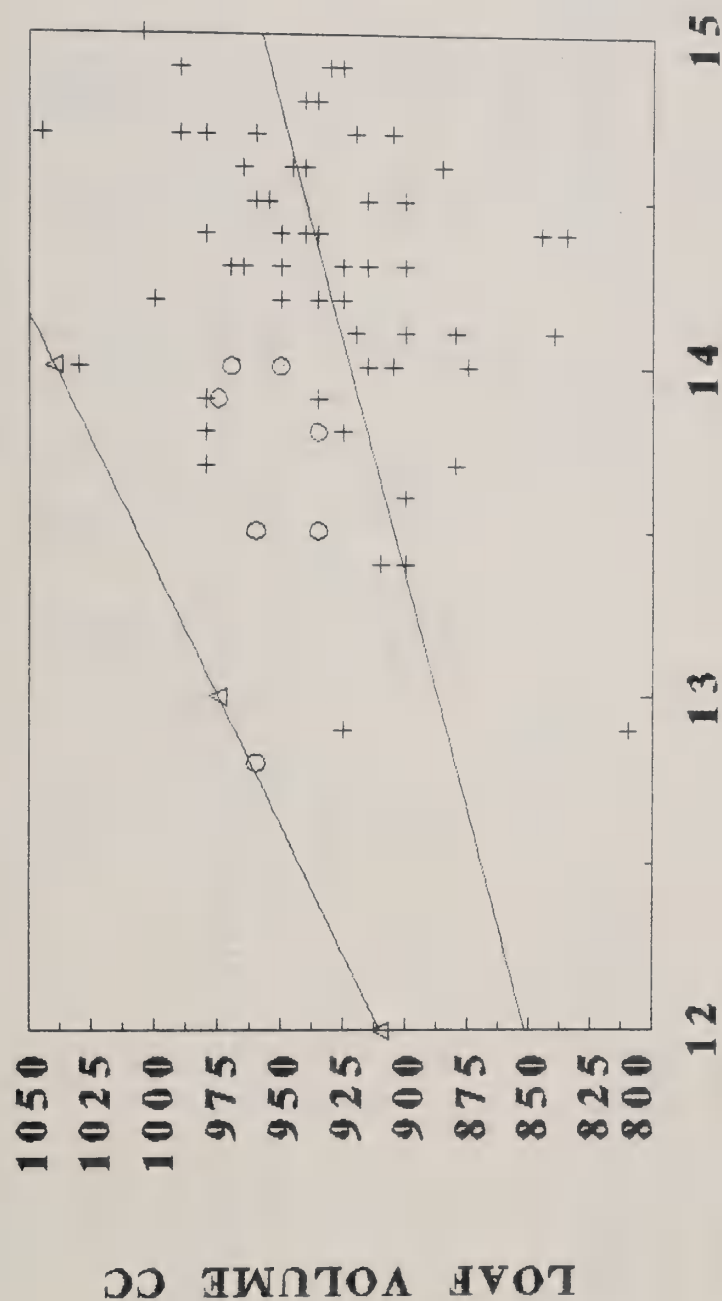
LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
371283 WA 6817		39	HRW	66.0	66.6	2.9	900	937		4 P-FYELD, Q-BCRGR
371284 WA 6817		40	HRW	66.0	65.7	2.3	900	881		3 P-FYELD, LVOL&BCRGR
371285 HATTON		C1017772	HRW	66.6	66.8	2.1	935	947		3
371286 WA 6817		41	HRW	66.4	66.1	2.9	915	896		4 Q-FYELD, P-LVOL
371287 WA 6817		42	HRW	67.9	67.8	2.8	880	874		4 Q- " P- "
371288 WA 6817		43	HRW	66.6	66.9	2.9	880	899		4 Q- " P- "
371289 WA 6817		44	HRW	67.9	67.5	3.0	835	810		5 Q- " P- "
371290 WA 6817		47	HRW	66.9	66.5	2.9	845	820		6 Q- " P- "
371291 WA 6817		48	HRW	66.7	66.6	3.0	840	834		5 Q- " P- "
371292 WA 6817		49	HRW	68.0	67.3	2.7	905	862		3 Q- " P- "
371293 WA 6817		50	HRW	66.4	66.3	3.3	880	874		4 Q- " P- "
371294 HATTON		C1017772	HRW	66.6	67.1	2.5	935	966		4
371295 WA 6817		51	HRW	67.2	66.9	3.2	965	946		1 P-FYELD
371296 WA 6817		52	HRW	68.4	67.7	3.1	1045	1002		3 Q-FYELD
371297 WA 6817		53	HRW	67.5	67.8	3.0	980	999		3 Q-FYELD&BCRGR
371298 WA 6817		54	HRW	66.9	67.1	3.5	980	992		4 Q-FYELD
371299 WA 6817		55	HRW	68.6	68.3	2.8	970	951		2
371300 WA 6817		56	HRW	67.0	66.6	2.2	925	988		1 Q-FYELD&MT
371301 WA 6817		57	HRW	67.1	66.9	2.4	1000	988		2 Q-FYELD
371302 WA 6817		58	HRW	67.2	66.6	2.3	965	928		2 Q-FYELD
371303 WA 6817		59	HRW	67.7	67.3	3.0	940	915		2 Q-FYELD&LVOL
371304 WA 6817		60	HRW	66.6	66.4	3.0	935	923		3 Q-LVOL
371305 HATTON		C1017772	HRW	66.0	67.2	2.4	960	1034		2
371306 WA 6817		61	HRW	67.4	66.8	2.4	945	908		1 Q-FYELD&LVOL
371307 WA 6817		62	HRW	67.7	67.0	2.3	980	937		3 Q-BCRGR
371308 WA 6817		63	HRW	67.8	67.1	2.4	960	917		2 Q-LVOL
371309 WA 6817		64	HRW	66.4	65.5	2.1	930	874		4 P-MT&LVOL
371310 WA 6817		65	HRW	66.2	66.0	2.7	935	923		4 Q-BCRGR
371311 WA 6817		66	HRW	67.2	66.9	2.9	925	906		2 Q-FYELD&LVOL
371312 WA 6817		67	HRW	67.2	67.2	2.5	905	905		4 P-FYELD
371313 WA 6817		68	HRW	67.7	67.2	2.9	955	924		2 Q-FYELD&LVOL
371314 WA 6817		69	HRW	68.2	67.8	3.1	980	955		2 Q-FYELD

COMMENTS: These sister selections of WA 6817 are as a group characteristically low in flour yield and in loaf volume (observed in the plot on page 3). Most were poorer than Hatton in baking performance and in milling quality. Few, including Hatton were as good in baking for their protein content as the long term expected average for loaf volume. Some of the better selections are footnoted as "promising", however, most had some marginal properties as noted in "Remarks". The most promising selections are 15, 31, 33, 52, 53, 54, and 57. Also see Nursery code #129 for a "continuation of WA 6817 Siblings."

LOAF VOLUME VS PROTEIN WA6817 Sibling Trial



NURSCO 129

LIND, WA

E. DONALDSON

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH 1/	MSCOR	FPROT 1?	MABSC 3/	MTYPE
*371315 WA 6817		6/70	HRW	60.1	69.4	0.35	86.4	13.7	67.3	4H
371316 HATTON		C1017772	HRW	62.9	70.5	0.34	88.1	12.9	68.0	2H
371317 WA 6817		71	HRW	59.7	69.7	0.37	85.8	14.3	67.2	4H
371318 WA 6817		6/72	HRW	59.3	69.8	0.36	86.4	13.9	66.8	4H
371319 WA 6817		73	HRW	59.5	69.5	0.35	86.5	14.6	66.9	2H
371320 HATTON		C1017772	HRW	62.7	70.6	0.35	87.7	13.5	66.5	2H

LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC 3/	MTIME	LVOL	LVOLC 4/	BCRGR	RMKS
371315 WA 6817		70	HRW	68.7	69.0	3.2	960	979	2	
371316 HATTON		C1017772	HRW	67.6	68.7	2.6	950	1018	2	
371317 WA 6817		71	HRW	69.2	68.9	3.2	915	896	2 Q-LVOL	
371318 WA 6817		72	HRW	67.4	67.5	3.5	940	946	2	
371319 WA 6817		73	HRW	68.2	67.6	2.6	900	863	2 Q-LVOL	
371320 HATTON		C1017772	HRW	65.7	66.2	2.0	950	981	3	

1/ Observed Values Corrected to 14% Moisture Basis.

3/ Absorption at 14% Moisture Corrected to 14% Protein.

4/ Observed Values Corrected to 14% Protein.

5/ Particularly Promising Overall Quality Characteristics.

6/ Promising Overall Quality Characteristics.

COMMENTS: These four samples of WA6817 varied considerable in their protein content and respectively in their baking performance. No.'s 71 and 73 had 1-2% higher protein but failed to respond as such in loaf volume.

*37000 is the second part of the 1987 crop.

NURSCO 130

MOSES LAKE, WA

J. BRITT

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE	BABS	BABSC
						<u>1/</u>		<u>1/</u>	<u>3/</u>			<u>3/</u>
371321 CZAR			HRS	63.2	71.0	0.45	77.7	9.4	64.9	4M	64.0	66.6
371322		JB000009	SRS	60.0	64.0	0.51	64.8	11.0	63.5	2H	62.2	63.2
371323 LANDMARK		JB000010	SWS	61.0	68.8	0.53	69.7	14.2	60.7	1H	62.6	60.4

LABNUM	VARIETY	IDNO	CLASS	MTIME	LVOL	LVOLC	BCRGR	CODI	CODIC	WTIN	NOSCO	RMKS
						<u>4/</u>			<u>4/</u>			
371321 CZAR			HRS	2.6	805	966	7	8.10	7.89	313	71	
371322		JB000009	SRS	1.8	855	917	2	8.54	8.46	346	68	
371323 LANDMARK		JB000010	SWS	1.2	930	798	6	8.75	8.99	375	71	

1/ Observed Values Corrected to 14% Moisture Basis.3/ Absorption at 14% Moisture Corrected to 12% Protein.4/ Observed Values Corrected to 12% Protein.5/ Particularly Promising Overall Quality Characteristics.6/ Promising Overall Quality Characteristics.

COMMENTS: These samples were tested in cooperation with Firstline Seeds, Inc., of Moses Lake, WA. Selection JB000009 was found to be soft in endosperm and low in flour yield. It is short and weak in dough mixing properties, but did give a fair loaf volume and good crumb grain. Because of these major deficiencies it is unsatisfactory. Selection JB000010 is also low in flour yield, but appeared to have good soft wheat properties based on the large cookie spread, particularly at 14.2% flour protein. Results for this line are questionable and inconclusive.

LABNUM	Genotype	VARIETY	IDNO Field #	CLASS	TWT	FYIELD	FASH	MSCOR	FPROT	SED.	MTYPE	FABSC	FPEAK	RMK
371324	01 MT. HERMON 01-01		0295	HRW	11.0	39.7								
371325	01-13		0318	HRW	19.3	49.1	0.94	34.4	21.5				4.9	
371326	01-22		2044	HRW	11.9	38.4	0.93	23.9	29.4				5.0	
371327	01-60		0135, 2135	HRW	10.8	38.4	0.93	23.8	24.9				4.6	
371328	03 03-08		47,227,222	HRW	25.0	45.5	0.95	30.5	19.7				4.7	
371329	03-13		2147	HRW	27.2	50.4	0.94	35.6	21.7				2.9	
371330	03-19		2078,2205	HRW	28.3	49.5	0.95	34.6	22.0				2.9	
371331	03-40		16, 2016	HRW	26.1	41.2	0.95	25.6	21.1				3.2	
371332	04 ROSH PINA 4-07		2344	HRW	32.1	47.9	0.95	32.9	21.8				4.0	
371333	4-12		76,2076	HRW	22.0	39.0	0.94	23.8	23.8				3.6	
371334	4-34		2160	HRW	17.4	41.2	0.94	26.2	23.5				4.6	
371335	4-55		0308	HRW	32.0	46.2	0.96	30.4	21.5				4.0	
371336	05 TABIGHA 5-08		0023	HRW	23.0	43.7	0.94	28.8	21.8				4.2	
371337	5-19		2309	HRW	25.6	44.3	0.94	29.4	21.7				5.0	
371338	5-44		0049	HRW	17.5	49.5	0.93	35.4	23.7				5.2	
371339	06 BAT SHLOMO 6-05		0188	HRW	25.1	44.7	0.93	30.3	31.5				4.1	
371340	6-27		0330	HRW	21.5	49.9	0.95	35.0	22.3				4.6	
371341	6-32		2043, 43	HRW	26.8	45.1	0.96	29.5	19.9				4.6	
371342	6-44		240,2240	HRW	20.0	47.4	0.97	31.4	20.6				4.1	
371343	09 KOKHAV HASHAK 9-02		214,2214	HRW	20.5	50.4	0.96	34.9	21.3				4.3	
371344	9-32		2057	HRW	14.5	49.1	0.94	34.3	22.8				3.5	
371345	9-50		0123	HRW	16.4	52.3	0.93	38.4	25.4				4.9	
371346	10 TAIYBA 10-09		T(U)2083	HRW	14.0	38.2	0.94	23.1	25.8				4.1	
371347	10-14		T154	HRW	14.7	42.8	0.94	28.0	23.3				4.0	
371348	10-43		0228	HRW	18.8	44.1	0.94	29.2	22.6				5.0	
371349	11 SANHENDRIA 11-06		0084	HRW	13.7	46.7	0.94	32.2	22.3				3.4	
371350	11-12		0283	HRW	11.7	41.2	0.93	26.9	28.2					
371351	11-19		2231X2	HRW	13.5	46.7	0.93	32.4	24.9				4.2	
371352	11-30		2013	HRW	9.4	46.7	0.93	32.8	25.8				3.3	
371353	12 BEIT MEIR 12-16		2119	HRW	9.7	49.1	0.93	35.2	23.8				3.9	
371354	12-27		0325	HRW	21.6	52.3	0.96	36.9	21.7				4.2	
371355	12-48		303,2303	HRW	16.2	49.1	0.95	34.1	23.0				3.0	
371356	12-76		2375	HRW	21.3	46.7	0.96	31.1	26.9				3.3	
371357	13 AHIHOOD 13-01		0045	HRW	27.2	48.1	0.95	33.0	22.0				5.0	
371358	13-12		0118	HRW	24.6	46.7	0.94	32.1	21.5				4.8	

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PULLMAN, WA.
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WILD EMMER

HAIFA, ISRAEL

E. NEVO

LABNUM	VARIETY	IDNO	CLASS	TWT	FVELD	FASH	MSCOR	FPROT	SED.	NTYPE	FABSC	FPEAK	RMKS
371359 13-35		0200	HRW	24.0	45.7	0.96	30.1	22.2	4.8				
371360 14 AMIRIM 14-02		0075	HRW	18.1	42.4	0.94	27.4	25.3	4.9				
371361 14-17		2093	HRW	19.8	46.7	0.94	32.2	23.6	4.4				
371362 14-34		2187	HRW	22.7	42.0	0.95	26.8	24.7	5.2				
371363 14-42		2051	HRW	11.2	55.1	0.92	41.7	29.7					
371364 15 BEIT OREN 15-01		2127	HRW	28.1	46.3	0.96	30.4	21.9	3.7				
371365 15-14		0015	HRW	24.4	50.4	0.96	34.7	22.9	3.5				
371366 15-26		0173	HRW	34.0	53.7	0.96	38.4	21.3	3.8				
371367 15-55		0053	HRW	28.2	50.2	0.94	35.5	20.9	3.4				
371368 17 GIVAT KOACH 17-14		2215	HRW	13.8	41.2	0.94	26.4	25.7	4.5				
371369 17-30		260,2260	HRW	10.6	46.7	0.93	32.4	27.4	5.3				
371370 17-48		2396	HRW	16.0	41.2	0.94	26.4	23.7	4.6				
371371 18 GITIT 18-01		0124	HRW	20.9	41.2	0.96	25.2	20.4	2.8				
371373 18-51		7,2007	HRW	16.7	41.2	0.94	26.1	24.2	3.0				
371374 19 JABA 19-03		69,2069	HRW	11.5	48.1	0.95	33.2	24.5	4.1				
371375 19-15		337,2337	HRW	19.0	49.6	0.95	34.4	24.1	3.2				
371376 19-25		165,2165	HRW	21.9	34.2	0.94	18.8	19.8	3.3				
371377 19-37		2209	HRW	23.0	50.2	0.95	34.9	21.4	5.6				
371378 20 DALIA 20-01		0092	HRW	14.8	49.9	0.94	35.3	24.6	4.6				
371379 20-34		2242	HRW	22.2	50.8	0.95	35.6	22.6	4.4				
371380 20-41		310,2310	HRW	37.3	44.4	0.95	28.9	20.8	3.5				
371381 24 YAABED 24-03		184,2184	HRW	20.4	45.6	0.95	30.1	21.4	5.2				
371382 24-18		2354	HRW	17.7	50.4	0.94	36.1	26.9	4.8				
371383 24-30		198,2198	HRW	23.8	50.0	0.96	34.6	21.1	5.1				
371384 24-46		95,2095	HRW	19.1	47.4	0.95	32.2	20.6	4.8				
371385 27 NESHEN 27-37		54,2054	HRW	20.4	49.1	0.94	34.7	20.8	4.2				
371386 27-41		0035	HRW	11.7	49.1	0.93	35.2	25.6	4.3				
371387 32 NAHEF 32-14		2225	HRW	15.6	46.7	0.93	32.5	27.0	4.0				
371388 32-22		0237	HRW	23.0	55.1	0.94	40.7	23.4	3.9				
371389 32-30		2073	HRW	19.3	50.4	0.94	36.1	26.9	4.0				
371390 47 GILBOA 07-01		2264	HRW	23.4	52.1	0.95	37.0	23.3	4.2				
371391 07-17		2291	HRW	15.8	47.7	0.94	33.1	29.9	6.0				
371392 07-28		2365	HRW	19.0	46.7	0.95	31.7	24.7	4.7				
371393 07-40		137,2137	HRW	19.7	48.1	0.96	32.3	23.2	4.8				

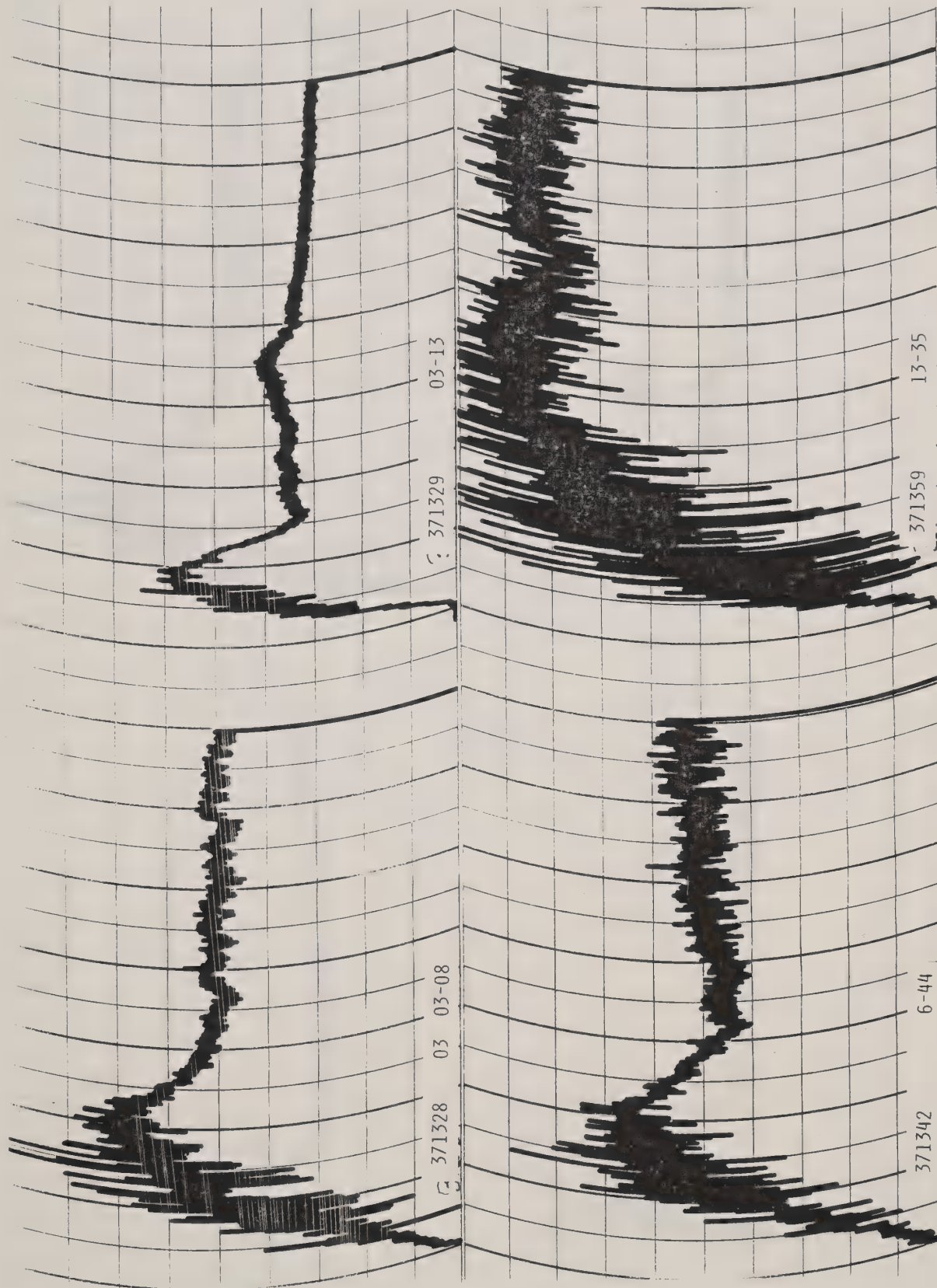
COMMENTS: These wild emmer (Triticum dicoccoides) grains were tested in cooperation with E. Nevo, Institute of Evaluation, Haifa University, Haifa, Israel. Wheats were grown in Israel and were received in the head. Grains were threshed by hand. Seed size and quality varied considerably giving test wts ranging from 9-34 165/Bu. Flour yields were correlated to test weight. All were extremely high in flour ash due to some extent to the high friability of the seed coat (bran). A micro sedimentation test showed low values with a small range compared to high protein and large range. Baking tests have not been completed and the shortage of flour will require excluding many from baking analysis. Mixograms were run on a few selected samples which had larger amounts of flour. These are on Pages 3 and 4. Selection 13-35 was significantly stronger than all the others.

USDA, SEA AR
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Pullman, WA
NURSCO 131

WILD EMMER

E. Nevo

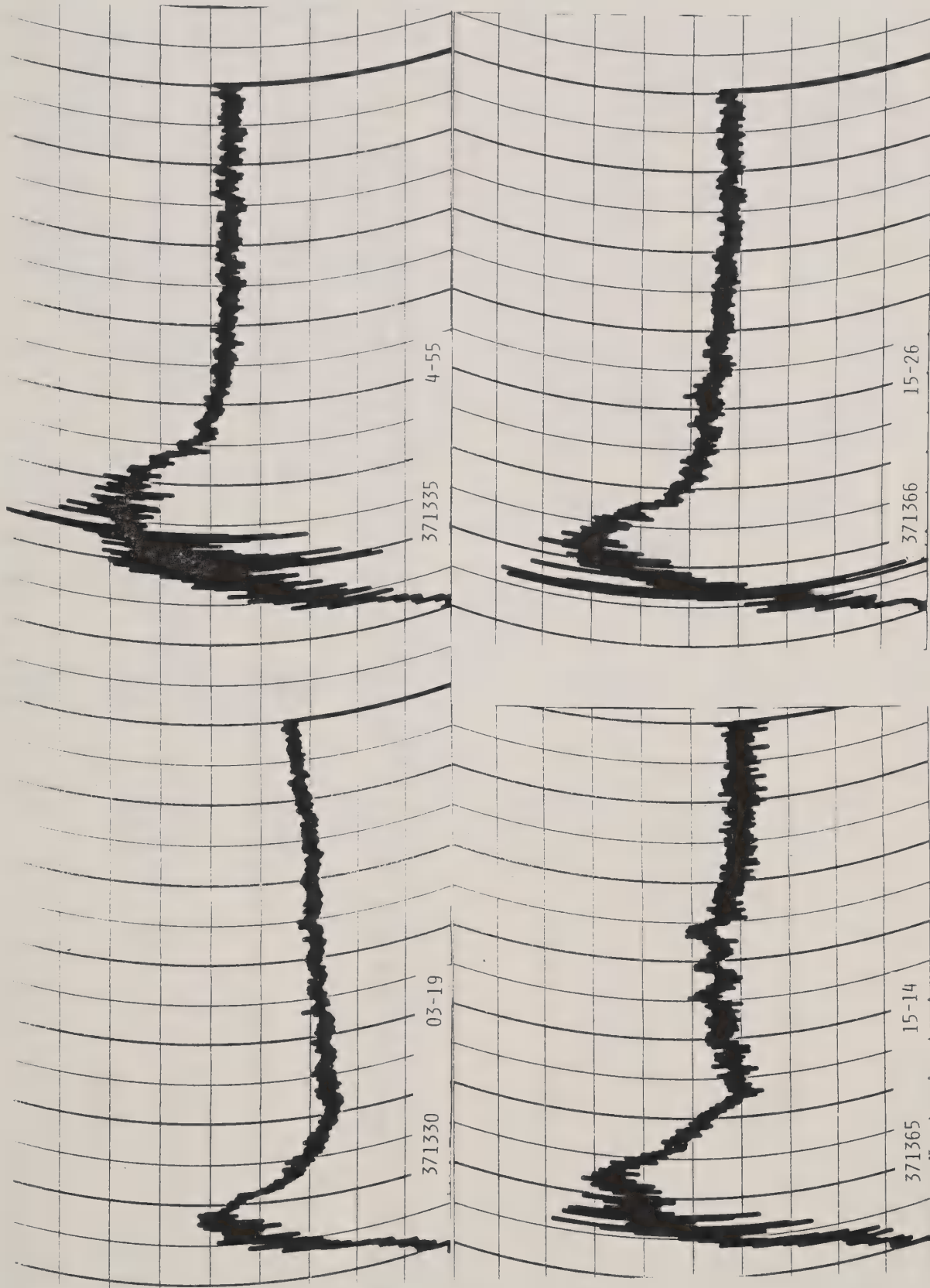
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WILD EMMER
HAIFA, ISRAEL

E. Nevo



USDA, SEA AR
WESTERN WHEAT
PULLMAN, WA.

NURSCO 132

BOUNTY WHEAT TESTS

WASCO CO., OR

A.W. MCNAB

LABNUM	VARIETY	IDNO	CLASS	TWT	FYELD	FASH	MSCOR	FPROT	MABSC	MTYPE
371394 BOUNTY 122		BH122	HRW	64.0	69.2	0.33	87.6	9.2	57.4	2M
371395 BOUNTY 202		BH202	HRW	62.8	69.1	0.35	86.5	7.7	57.6	3L
LABNUM	VARIETY	IDNO	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	RMKS
371394 BOUNTY 122		BH122	HRW	59.3	58.1	2.3	695	621	8	
371395 BOUNTY 202		BH202	HRW	58.0	58.3	2.4	585	604	9	

COMMENTS: The two Cargill samples were from variety trials of Oregon State University. Both, BH122 and BH202 were very poor in baking quality--short mixing, low volume, and heavy crumb structure after accounting for the low protein.

LABNUM	VARIETY	IDNO	CLASS	TWT	WMIST	WPROT	FYELD	FASH	MSCOR	FPROT	MABS	FABS
371401 4904		3-21	SWW	61.9	9.9	10.1	70.2	0.44	77.2	9.3	54.2	53.7
371402 4721		3-23	SWW	62.0	10.3	9.4	69.1	0.40	77.0	8.8	52.9	54.3
371403 4905		3-24	SWW	62.4	9.9	10.1	72.0	0.42	79.9	9.3	54.3	53.5
371404 5542		3-25	SWW	62.1	10.1	9.8	70.3	0.42	78.1	8.6	52.7	52.7
371405 4722		3-26	SWW	61.0	10.2	9.8	70.0	0.40	78.2	9.0	53.7	
371406 5534		3-27	SWW	61.8	9.7	9.5	70.5	0.40	79.8	8.5	52.6	52.6
371407 4723		3-28	SWW	61.7	9.5	10.2	71.5	0.40	81.7	9.2	53.7	52.6
371408 5545		3-28	SWW	61.9	9.8	9.7	71.7	0.40	81.5	9.2	53.7	52.6
371409 2286		3-31	SWW	62.2	10.1	10.1	69.4	0.40	77.7	9.0	54.3	53.1
371410 2288		4-5	SWW	62.3	9.9	10.1	69.5	0.39	79.1	9.3	54.3	53.9
371411 4729		4-5	SWW	60.7	9.7	9.8	67.7	0.40	75.2	8.7	54.2	54.7
371412 0802		4-6	SWW	62.2	10.0	9.6	70.6	0.40	80.0	8.9	53.8	53.9
371413 0805		4-6	SWW	63.1	9.8	8.4	68.1	0.38	76.8	7.3	52.9	52.4
371414 0808		4-6	SWW	61.8	10.9	9.6	69.1	0.41	75.4	8.6	53.7	53.9
371415 0809		4-6	SWW	61.5	10.2	10.2	67.2	0.40	74.1	8.9	53.6	53.4
371416 0810		4-6	SWW	61.6	10.4	10.1	69.7	0.39	78.2	9.0	54.3	53.3
371417 0816		4-6	SWW	61.8	10.6	10.2	70.0	0.40	79.0	8.6	53.7	53.4
371418 0824		4-6	SWW	62.2	9.9	10.2	70.8	0.39	79.5	9.0	53.2	53.2
371419 0826		4-6	SWW	62.6	9.8	8.9	67.9	0.37	76.3	8.2	53.3	52.3
371420 5557		4-6	SWW	62.2	9.9	10.0	69.8	0.40	77.2	8.8	53.4	52.1
371421 5558		4-6	SWW	61.1	10.0	9.7	71.3	0.40	79.8	8.3	54.5	52.8
371422 4907		4-7	SWW	62.0	9.8	9.9	70.0	0.38	79.9	8.8	53.4	52.3
371423 5559		4-7	SWW	62.6	10.0	10.1	68.7	0.38	76.1	8.7	54.0	52.2
371424 4731		4-8	SWW	61.3	10.4	10.1	70.4	0.38	79.2	8.7	52.9	52.4
371425 5560		4-8	SWW	61.9	10.2	10.2	71.4	0.37	81.5	8.8	54.2	53.2
371426 5655		4-8	SWW	61.9	9.5	10.1	72.1	0.36	83.6	9.1	53.6	52.4
371427 4727		4-9	SWW	61.9	10.4	10.1	72.3	0.40	81.1	8.5	54.1	52.2
371428 5561		4-9	SWW	61.8	9.7	10.4	71.7	0.39	81.7	8.7	54.0	52.8
371429 5656		4-9	SWW	62.3	9.6	10.2	71.9	0.38	82.5	8.7	54.5	53.4
371430 4733		4-12	SWW	61.6	10.1	9.8	71.8	0.39	82.6	8.5	54.7	52.7
371431 0784		4-13	SWW	62.4	10.0	9.6	73.7	0.41	84.9	8.4	53.1	52.6
371432 0785		4-13	SWW	62.4	10.1	9.8	71.0	0.41	80.8	8.0	52.7	53.3
371433 0786		4-13	SWW	61.7	10.0	9.9	71.2	0.40	80.8	7.9	53.7	52.7
371434 0787		4-13	SWW	61.3	10.5	10.3	71.1	0.40	79.2	8.5	53.1	52.9
371435 0793		4-13	SWW	62.7	9.8	9.9	70.4	0.40	78.8	8.3	53.6	53.4

NURSCO 133

LABNUM	VARIETY	IDNO	CLASS	FPEAK	FSTAB	CODI	CAVOL	SCSOR	WTIN	NOSCO	WFN	WDSI
371401 4904		3-21	SWW	2.0	3.7	9.15	1145	63.0	344	76	425	0.089
371402 4721		3-23	SWW	1.5	3.6	9.35	1220	73.0	353	74	285	0.270
371403 4905		3-24	SWW	1.7	2.4	8.86	1125	61.0	353	75	407	0.096
371404 5542		3-25	SWW	1.8	2.7	9.12	1170	66.0	355	74	408	0.084
371405 4722		3-26	SWW	2.0	3.9	9.14	1195	68.0	354	74	414	0.096
371406 5534		3-27	SWW	1.2	3.6	9.09	1220	72.0	353	72	377	0.110
371407 4723		3-28	SWW	2.0	3.8	9.22	1180	66.0	353	73	463	0.079
371408 5545		3-28	SWW	2.0	3.8	9.22	1210	72.0	353	73	383	0.144
371409 2286		3-31	SWW	2.2	4.0	9.05	1210	72.0	350	73	470	0.080
371410 2288		4-5	SWW	1.9	3.8	9.00	1220	73.0	350	74	390	0.154
371411 4729		4-5	SWW	1.3	3.1	9.16	1175	66.0	346	75	382	0.104
371412 0802		4-6	SWW	1.4	3.1	9.04	1195	68.0	341	75	453	0.089
371413 0805		4-6	SWW	1.4	3.0	9.17	1195	68.0	338	72	321	0.165
371414 0808		4-6	SWW	1.4	3.2	9.14	1170	68.0	343	75	453	0.098
371415 0809		4-6	SWW	1.4	3.1	9.12	1210	72.0	347	77	371	0.141
371416 0810		4-6	SWW	1.6	3.4	9.19	1190	69.0	340	73	456	0.118
371417 0816		4-6	SWW	1.5	2.8	9.25	1210	71.0	354	78	415	0.099
371418 0824		4-6	SWW	1.4	2.5	8.89	1205	69.0	349	75	387	0.097
371419 0826		4-6	SWW	1.1	3.6	9.14	1265	76.0	334	74	374	0.151
371420 5557		4-6	SWW	2.1	2.8	9.02	1125	61.0	350	78	437	0.120
371421 5558		4-6	SWW	1.7	3.0	9.11	1185	68.0	353	77	428	0.092
371422 4907		4-7	SWW	1.6	3.2	9.00	1250	72.0	346	77	396	0.098
371423 5559		4-7	SWW	1.1	3.5	9.16	1290	75.0	357	75	343	0.168
371424 4731		4-8	SWW	1.3	3.1	8.87	1240	73.0	352	75	407	0.103
371425 5560		4-8	SWW	1.4	3.9	8.90	1145	66.0	345	74	415	0.094
371426 5655		4-8	SWW	1.7	3.0	9.36	1215	72.0	340	74	442	0.103
371427 4727		4-9	SWW	2.0	3.5	9.09	1140	66.0	336	75	381	0.097
371428 5561		4-9	SWW	1.6	3.3	9.11	1160	67.0	346	76	390	0.105
371429 5656		4-9	SWW	1.3	3.2	9.25	1200	69.0	336	73	414	0.076
371430 4733		4-12	SWW	1.1	3.0	9.16	1185	68.0	365	77	423	0.116
371431 0784		4-13	SWW	1.4	2.9	9.00	1150	66.0	359	78	406	0.088
371432 0785		4-13	SWW	1.7	2.5	9.11	1230	72.0	354	75	357	0.121
371433 0786		4-13	SWW	1.3	3.3	9.02	1225	73.0	363	76	413	0.111
371434 0787		4-13	SWW	1.6	3.4	9.14	1220	70.0	359	76	383	0.076
371435 0793		4-13	SWW	1.4	2.7	8.96	1205	71.0	344	75	446	0.093

NURSCO 133

LABNUM	VARIETY	IDNO	CLASS	TWT	WMIST	WPROT	FYELD	FASH	MSCOR	FPROT	MABS	FABS
371436 0794		4-13	SWW	60.7	10.6	10.4	67.0	0.42	74.0	8.7	53.7	52.9
371437 0796		4-13	SWW	62.3	10.2	10.3	70.3	0.40	79.5	8.7	54.4	53.1
371438 0797		4-13	SWW	62.0	9.4	9.9	73.9	0.39	85.2	8.2	53.0	52.5
371439 0799		4-13	SWW	62.2	9.8	9.8	71.5	0.42	80.4	8.2	53.4	52.7
371440 0776		4-14	SWW	61.3	10.2	9.9	72.6	0.41	82.6	8.0	53.4	53.3
371441 4736		4-14	SWW	60.4	10.8	9.7	72.0	0.43	80.6	8.2	54.1	52.8
371442 4909		4-14	SWW	61.9	9.9	10.4	70.4	0.39	80.6	8.7	54.0	53.2
371443 5564		4-14	SWW	61.8	10.2	10.4	72.3	0.39	82.0	8.7	54.5	53.5
371444 5565		4-14	SWW	61.8	10.0	10.5	72.4	0.40	81.2	8.9	53.7	52.9
371445 2290		4-15	SWW	62.0	9.9	9.9	70.4	0.39	79.3	8.4	53.7	52.9
371446 5566		4-15	SWW	61.7	10.0	9.7	69.0	0.39	75.9	8.5	54.1	53.8
371447 5567		4-16	SWW	61.7	9.7	9.9	68.8	0.39	74.7	8.5	54.5	51.8
371448 6651		4-16	SWW	61.7	10.0	10.5	69.9	0.42	76.0	9.0	55.2	54.0
371449 4737		4-17	SWW	61.5	10.3	9.7	68.1	0.40	74.4	8.4	54.3	52.6
371450 5570		4-17	SWW	61.3	10.1	10.3	68.9	0.40	76.5	8.9	53.6	52.8
371451 5571		4-17	SWW	62.1	10.1	9.0	70.1	0.39	77.7	8.2	54.4	52.4
371452 4740		4-18	SWW	60.6	10.6	10.4	68.7	0.38	77.8	8.7	54.7	53.1
371453 4910		4-18	SWW	62.0	9.5	11.0	69.9	0.40	78.8	9.6	55.3	53.3
371454 5671		4-18	SWW	61.5	10.1	10.1	70.0	0.40	78.5	8.7	54.3	53.3
371455 5672		4-19	SWW	60.6	10.5	9.7	68.1	0.40	77.3	8.4	54.6	52.8

NURSCO 133

LABNUM	VARIETY	IDNO	CLASS	FPEAK	FSTAB	CODI	CAVOL	SCSOR	WTIN	NOSCO	WFN	WDSI
371436	0794	4-13	SWW	2.3	3.0	9.09	1245	72.0	344	76	410	0.107
371437	0796	4-13	SWW	1.5	3.0	9.14	1240	71.0	345	76	398	0.108
371438	0797	4-13	SWW	1.7	3.1	9.26	1225	71.0	348	75	418	0.091
371439	0799	4-13	SWW	1.4	2.9	8.99	1235	73.0	348	76	448	0.086
371440	0776	4-14	SWW	1.5	2.5	9.09	1205	71.0	362	76	405	0.096
371441	4736	4-14	SWW	1.4	3.0	8.95	1230	73.0	336	74	351	0.219
371442	4909	4-14	SWW	1.7	3.5	9.16	1230	72.0	360	75	433	0.096
371443	5564	4-14	SWW	2.0	3.0	8.89	1230	72.0	373	76	411	0.100
371444	5565	4-14	SWW	2.3	4.4	8.82	1185	70.0	353	74	333	0.221
371445	2290	4-15	SWW	1.5	3.9	8.81	1240	74.0	360	77	372	0.132
371446	5566	4-15	SWW	1.2	3.3	9.26	1235	74.0	343	76	415	0.085
371447	5567	4-16	SWW	1.4	2.8	9.02	1230	73.0	337	75	399	0.120
371448	6651	4-16	SWW	1.5	3.5	9.07	1225	71.0	360	78	387	0.129
371449	4737	4-17	SWW	1.2	3.9	9.24	1250	75.0	352	73	389	0.078
371450	5570	4-17	SWW	1.3	3.9	9.05	1215	72.0	333	74	389	0.128
371451	5571	4-17	SWW	1.2	2.9	9.05	1180	68.0	328	75	402	0.070
371452	4740	4-18	SWW	2.5	5.1	9.16	1225	70.0	331	75	416	0.100
371453	4910	4-18	SWW	2.1	4.1	9.06	1170	66.0	338	73	436	0.063
371454	5671	4-18	SWW	1.4	3.9	8.97	1155	67.0	330	74	454	0.076
371455	5672	4-19	SWW	1.7	4.1	9.21	1275	75.0	347	75	400	0.117

COMMENTS: This table of data is the quality analysis of 55 Western White cargo samples collected in the spring of 1988. The work is done in cooperation with U.S. Wheat Assoc., Inc. in an effort to develop a data base and follow the quality of wheat throughout the marketing year.

LABNUM	VARIETY	CLASS	TWT	KKWT	WMST	WASH	WPROT	WDSI	WFN	FYELD	FASH	FPROT	MABS	MABSC
371456	LOW PROTEIN	SWW	61.6	44.1	9.0	1.33	8.6	0.087	357	72.0	0.36	6.8	52.7	54.9
371457	MEDIUM PROTEIN	SWW	63.4	32.0	10.2	1.59	9.1	0.073	403	72.0	0.40	7.8	55.5	56.7
371458	HIGH PROTEIN	SWW	63.4	41.0	9.6	1.71	10.0	0.103	368	72.0	0.40	8.2	55.1	55.9
371459	WESTERN U.S.	CLUB	61.7	33.4	8.7	1.48	9.2	0.080	459	72.0	0.38	7.0	51.0	53.0
371460	EASTERN U.S.	SRW	62.4	32.6	11.8	1.55	10.8	0.082	431	72.0	0.42	9.3	55.4	55.1
371461	FRENCH	SRW	57.3	38.9	13.8	1.63	10.9	0.481	293	72.0	0.48	8.7	55.1	55.4
371462	AUSTRALIAN	SWS	60.0	34.6	14.2	1.44	11.3	0.097	516	72.0	0.49	9.4	59.8	59.4
371463	LOW PROTEIN	SWW	61.6	44.1	9.0	1.33	8.6	0.087	357	76.0	0.40	6.9	52.7	54.8
371464	MEDIUM PROTEIN	SWW	63.4	32.0	10.2	1.59	9.1	0.073	403	76.0	0.45	8.0	55.3	56.3
371465	HIGH PROTEIN	SWW	63.4	41.0	9.6	1.71	10.0	0.103	368	76.0	0.43	8.6	55.3	55.7
371466	WESTERN U.S.	CLUB	61.7	33.4	8.7	1.48	9.2	0.080	459	76.0	0.42	7.2	51.7	53.5
371467	EASTERN U.S.	SRW	62.4	32.6	11.8	1.55	10.8	0.082	431	76.0	0.48	9.6	55.2	54.6
371468	FRENCH	SRW	57.3	38.9	13.8	1.63	10.9	0.481	293	76.0	0.57	9.4	57.3	56.9
371469	AUSTRALIAN	SWS	60.0	34.6	14.2	1.44	11.3	0.097	516	76.0	0.60	9.9	62.2	61.3
371470	LOW PROTEIN	SWW	61.6	44.1	9.0	1.33	8.6	0.087	357	82.0	0.55	7.2	54.4	56.2
371471	MEDIUM PROTEIN	SWW	63.4	32.0	10.2	1.59	9.1	0.073	403	82.0	0.66	8.6	57.0	57.4
371472	HIGH PROTEIN	SWW	63.4	41.0	9.6	1.71	10.0	0.103	368	82.0	0.66	9.0	56.3	56.3
371473	WESTERN U.S.	CLUB	61.7	33.4	8.7	1.48	9.2	0.080	459	82.0	0.56	7.7	53.0	54.3
371474	EASTERN U.S.	SRW	62.4	32.6	11.8	1.55	10.8	0.082	431	82.0	0.66	10.2	56.9	55.7
371475	FRENCH	SRW	57.3	38.9	13.8	1.63	10.9	0.481	293	82.0	0.76	9.7	59.3	58.6
371476	AUSTRALIAN	SWS	60.0	34.6	14.2	1.44	11.3	0.097	516	82.0	0.73	10.3	62.6	61.3

WMC WORLD WHEAT STUDY

NURSCO 134

LABNUM	VARIETY	CLASS	MTYPE	P	L	W	FABS	FABSC	FPEAK	FSTAB	VISC	VISCC	WHC75	AWRC
Alveograph														
371456	LOW PROTEIN	SWW	2L	48	50	76	53.1	55.3	1.7	1.8	42	90	509.5	60
371457	MEDIUM PROTEIN	SWW	2L	56	65	96	55.7	56.9	1.6	3.0	60	85	503.5	60
371458	HIGH PROTEIN	SWW	1M	45	64	70	56.0	56.8	1.8	2.0	64	79	521.0	60
371459	WESTERN U.S.	CLUB	1L	44	54	70	51.6	53.6	1.6	2.6	48	93	512.0	58
371460	EASTERN U.S.	SRW	3L	49	117	172	52.8	52.5	3.0	6.9	103	96	511.5	58
371461	FRENCH	SRW	4L	44	112	154	50.9	51.2	1.6	7.0	98	106	583.5	58
371462	AUSTRALIAN	SWS	6M	112	86	322	59.2	58.8	6.9	19.3	130	118	534.0	68
371463	LOW PROTEIN	SWW	2L	52	56	89	53.2	55.3	1.5	2.9	41	84	497.5	60
371464	MEDIUM PROTEIN	SWW	2L	53	66	89	56.1	57.1	2.4	2.6	55	72	499.5	62
371465	HIGH PROTEIN	SWW	1M	43	81	75	56.9	57.3	1.8	1.9	62	68	520.5	62
371466	WESTERN U.S.	CLUB	2L	43	53	66	52.5	54.3	1.0	2.0	42	74	504.5	58
371467	EASTERN U.S.	SRW	3L	49	113	163	53.2	52.6	4.0	6.1	91	79	503.5	60
371468	FRENCH	SRW	4L	47	126	163	52.4	52.0	1.8	6.9	91	83	597.0	58
371469	AUSTRALIAN	SWS	6M	129	88	366	63.0	62.1	6.5	14.1	110	90	548.0	72
371470	LOW PROTEIN	SWW	2L	51	41	62	55.4	57.2	1.0	2.7	35	61	490.5	64
371471	MEDIUM PROTEIN	SWW	2L	55	31	54	58.7	59.1	2.0	2.4	39	43	488.5	52
371472	HIGH PROTEIN	SWW	1M	45	30	44	60.1	60.1	1.7	1.5	45	45	508.5	46
371473	WESTERN U.S.	CLUB	2L	44	32	44	55.4	56.7	1.2	2.5	37	53	497.5	60
371474	EASTERN U.S.	SRW	3L	57	89	133	57.0	55.8	3.3	5.5	60	47	506.0	64
371475	FRENCH	SRW	4L	57	121	159	54.1	53.4	2.5	7.0	41	35	557.5	62
371476	AUSTRALIAN	SWS	6M	106	79	252	64.2	62.9	6.5	6.2	51	40	535.5	72

USDA, ARS

WESTERN WHEAT QUALITY LAB.

PULLMAN, WA

NURSCO 134

PAGE 3

WWC WORLD WHEAT STUDY

LABNUM	VARIETY	CLASS	BABS	BABSC	MTIME	LVOL	LVOLC	BCRGR	COOI	COOIC	CAVOL	EXFAC	CRGR	TEXTA	SCSOR
371456	LOW PROTEIN	SWW	53.4	55.6	2.1	515	647	9	9.21	8.97	1210	28	19	24	71
371457	MEDIUM PROTEIN	SWW	56.7	57.9	2.1	615	687	8	9.07	8.94	1275	30	22	24	76
371458	HIGH PROTEIN	SWW	56.3	57.1	1.7	585	633	8	9.01	8.92	1210	28	22	24	74
371459	WESTERN U.S.	CLUB	52.7	54.7	2.3	585	695	8	9.29	9.15	1240	29	19	24	72
371460	EASTERN U.S.	SRW	56.6	56.3	3.1	850	832	2	8.87	8.91	1260	30	19	23	72
371461	FRENCH	SRW	56.3	56.6	3.8	740	758	4	9.05	9.02	1290	31	18	24	73
371462	AUSTRALIAN	SWS	61.5	61.1	4.2	805	781	5	8.21	8.26	1120	24	19	22	65
371463	LOW PROTEIN	SWW	54.4	56.5	2.3	530	656	9	8.80	8.57	1255	30	20	23	73
371464	MEDIUM PROTEIN	SWW	55.0	56.0	1.8	565	625	9	8.86	8.75	1245	29	19	24	72
371465	HIGH PROTEIN	SWW	56.0	56.4	1.5	600	624	8	9.07	9.03	1230	29	19	23	71
371466	WESTERN U.S.	CLUB	52.9	54.7	2.0	575	674	9	9.16	9.03	1200	27	19	24	70
371467	EASTERN U.S.	SRW	56.4	55.8	3.0	850	814	2	9.37	9.44	1210	28	19	23	70
371468	FRENCH	SRW	58.5	58.1	3.7	790	766	4	8.86	8.91	1255	30	16	23	69
371469	AUSTRALIAN	SWS	64.4	63.5	4.0	760	706	5	8.74	8.84	1045	21	14	22	57
371470	LOW PROTEIN	SWW	55.6	57.4	2.4	485	593	9	8.60	8.40	1190	27	18	25	70
371471	MEDIUM PROTEIN	SWW	57.7	58.1	2.1	475	499	9	8.64	8.59	1185	27	14	24	65
371472	HIGH PROTEIN	SWW	56.5	56.5	1.9	450	450	9	8.31	8.31	1150	25	14	24	63
371473	WESTERN U.S.	CLUB	53.7	55.0	2.4	460	532	9	8.54	8.45	1175	26	20	24	70
371474	EASTERN U.S.	SRW	57.6	56.4	3.2	740	668	6	8.52	8.66	1155	26	14	21	61
371475	FRENCH	SRW	59.0	58.3	4.1	710	668	7	8.75	8.83	1175	26	14	22	62
371476	AUSTRALIAN	SWS	65.3	64.0	4.1	725	647	8	7.84	7.98	1050	21	14	20	55

NURSCO 134

LABNUM	VARIETY	CLASS	WTIN	RNCOL	CNCOL	TEXTNO	NYELD	NOSCOR	STEAMED BREAD		
									Vol.(cc)	Tax(g/cm ²)	Score
371456	LOW PROTEIN	SWW	322	16	14	28	17	75	733	86	3
371457	MEDIUM PROTEIN	SWW	336	15	15	31	17	78	793	84	3
371458	HIGH PROTEIN	SWW	346	15	15	33	18	81	833	72	3-
371459	WESTERN U.S.	CLUB	354	16	16	26	18	76	810	78	4-
371460	EASTERN U.S.	SRW	343	12	12	26	18	68	970	62	4-
371461	FRENCH	SRW	340	12	13	25	17	67	828	75	4-
371462	AUSTRALIAN	SWS	331	14	14	29	17	74	678	51	1
371463	LOW PROTEIN	SWW	320	15	15	26	16	72	735	83	3
371464	MEDIUM PROTEIN	SWW	348	14	14	27	18	73	838	70	3
371465	HIGH PROTEIN	SWW	347	14	14	28	18	74	775	87	3-
371466	WESTERN U.S.	CLUB	338	16	15	26	17	74	768	93	3+
371467	EASTERN U.S.	SRW	328	11	12	24	17	64	998	46	4-
371468	FRENCH	SRW	332	10	9	24	17	60	880	67	4
371469	AUSTRALIAN	SWS	324	12	12	28	17	69	750	42	1+
371470	LOW PROTEIN	SWW	308	12	12	26	16	66	620	155	3-
371471	MEDIUM PROTEIN	SWW	310	10	11	27	16	64	640	168	2+
371472	HIGH PROTEIN	SWW	343	10	11	28	18	67	633	144	2+
371473	WESTERN U.S.	CLUB	336	12	13	27	17	69	650	156	3-
371474	EASTERN U.S.	SRW	332	7	7	23	17	54	848	78	3
371475	FRENCH	SRW	334	7	7	23	17	54	623	170	2+
371476	AUSTRALIAN	SWS	318	10	11	26	16	63	763	54	2+

COMMENTS: These seven wheats were taken from commercial channels. The 400 lb samples were split three ways and milled to 72, 76, and 82% flour extraction and the resulting flours test baked in cookies, sponge cake, noodles, pan bread, and steamed bread. The work was done in cooperation with the Washington Wheat Commission to document similarities and differences between PNW soft white wheat (3 protein levels) and an average protein level in Eastern SRW, French SRW, and Australian standard white. A summary of results with charts and graphs were forwarded to the Washington Wheat Commission in a separate report.

NURSCO 135

LABNUM	VARIETY	IDNO	CLASS	TWT	WMIST	WPROT	FYELD	FASH	MSCOR	FPROT	MABS	FABS
371477 4069		6-23	SWW	61.1	10.1	9.7	72.1	0.42	81.8	9.0	53.7	53.2
371478 4072		6-26	SWW	61.3	10.4	9.4	72.7	0.42	81.9	8.6	52.7	52.5
371479 4073		6-27	SWW	60.5	10.7	9.4	72.4	0.41	82.2	8.2	54.0	53.2
371480 5591		6-28	SWW	61.0	10.4	9.3	72.5	0.41	82.5	8.3	53.0	53.0
371481 5592		6-29	SWW	61.4	9.9	10.1	70.5	0.41	82.7	8.5	53.4	53.0
371482 5594		7-1	SWW	61.4	10.6	9.6	72.7	0.40	82.8	8.4	52.7	52.7
371483 3757		7-1	SWW	60.6	11.2	9.5	71.7	0.43	79.7	8.7	53.4	53.5
371484 5595		7-2	SWW	61.5	10.6	9.2	71.1	0.40	81.0	8.6	53.1	53.2
371485 4075		7-2	SWW	61.1	10.4	9.8	72.3	0.42	81.2	8.4	53.9	53.4
371486 4077		7-3	SWW	61.5	10.5	9.8	73.0	0.41	83.1	8.1	51.7	53.2
371487 5596		7-3	SWW	61.8	10.1	10.1	72.4	0.41	82.8	8.8	52.5	53.0
371488 715		7-6	SWW	61.8	11.1	9.4	73.3	0.42	83.6	8.4	53.4	52.9
371489 4078		7-6	SWW	61.8	10.0	9.7	71.7	0.41	80.1	8.3	53.3	52.5
371490 4079		7-7	SWW	62.2	10.4	9.8	70.2	0.42	79.1	8.2	54.1	53.1
371491 714		7-8	SWW	62.8	10.5	8.9	70.4	0.39	80.2	8.2	54.3	53.3
371492 4081		7-8	SWW	61.8	10.3	9.8	71.7	0.39	83.3	8.5	54.2	53.9
371493 4082		7-8	SWW	61.0	10.4	9.8	69.9	0.40	78.2	8.6	53.4	53.6
371494 3760		7-8	SWW	61.4	10.6	9.9	71.6	0.42	79.0	8.4	53.8	53.0
371495 4504		7-9	SWW	61.2	10.6	10.3	71.8	0.42	80.0	9.0	53.7	53.2
371496 4083		7-9	SWW	61.8	10.5	9.2	72.6	0.40	82.7	7.9	53.9	53.0
371497 5598		7-11	SWW	62.5	10.0	8.7	70.5	0.40	79.6	7.3	52.4	52.9
371498 4084		7-11	SWW	61.5	9.9	9.2	72.8	0.41	82.7	8.0	53.4	52.2
371499 3761		7-11	SWW	61.4	10.2	9.6	72.6	0.42	81.7	8.3	52.3	53.3
371500 4085		7-12	SWW	61.2	10.5	8.8	71.9	0.42	81.0	7.9	54.1	52.8
371501 4089		7-12	SWW	61.4	10.3	9.4	76.1	0.40	88.4	7.8	52.9	52.4
371502 3762		7-12	SWW	61.5	10.3	9.2	73.2	0.44	80.0	8.2	52.9	52.3
371503 3763		7-12	SWW	61.9	10.6	9.9	71.4	0.44	80.3	8.2	53.2	52.9
371504 3764		7-13	SWW	61.2	11.2	9.6	72.8	0.44	82.1	8.1	53.6	52.8
371505 3765		7-13	SWW	61.7	10.5	10.4	71.3	0.43	77.8	8.4	52.0	52.5
371506 5599		7-13	SWW	62.2	10.0	10.6	72.6	0.43	81.3	8.7	53.1	52.9
371507 3766		7-14	SWW	62.0	10.4	9.3	72.4	0.43	80.4	8.6	54.0	52.5
371508 3767		7-14	SWW	61.9	10.2	9.6	72.5	0.44	80.7	8.2	52.5	52.7
371509 4090		7-14	SWW	61.9	10.4	10.3	73.0	0.43	82.4	9.2	53.0	52.5
371510 3768		7-15	SWW	61.8	10.1	10.3	72.5	0.44	81.8	8.5	53.0	52.8
371511 3769		7-15	SWW	61.6	11.3	10.4	71.6	0.42	81.8	7.7	52.5	52.9

NURSCO 135

LABNUM	VARIETY	IDNO	CLASS	FPEAK	FSTAB	CODI	CAVOL	SCSOR	WTIN	NOSCO	WFN	WDSI
371477 4069		6-23	SWW	1.6	3.3	8.67	1210	70.0	350	74	387	0.170
371478 4072		6-26	SWW	1.8	3.1	8.77	1230	72.0	348	76	431	0.099
371479 4073		6-27	SWW	1.3	2.9	8.74	1210	73.0	339	74	405	0.117
371480 5591		6-28	SWW	1.5	3.1	8.67	1205	72.0	348	74	370	0.215
371481 5592		6-29	SWW	1.8	3.3	8.85	1165	68.0	352	74	426	0.085
371482 5594		7-1	SWW	1.8	3.8	8.91	1190	70.0	341	74	374	0.137
371483 3757		7-1	SWW	1.4	2.2	8.84	1270	76.0	347	77	394	0.094
371484 5595		7-2	SWW	1.7	2.9	8.90	1220	72.0	348	75	439	0.093
371485 4075		7-2	SWW	1.1	2.5	8.96	1205	73.0	341	74	391	0.082
371486 4077		7-3	SWW	1.9	3.4	8.77	1225	73.0	327	74	398	0.099
371487 5596		7-3	SWW	1.8	3.5	8.81	1190	69.0	326	72	417	0.079
371488 715		7-6	SWW	1.7	2.8	8.95	1210	71.0	314	69	358	0.063
371489 4078		7-6	SWW	1.6	3.6	8.75	1205	71.0	320	74	390	0.079
371490 4079		7-7	SWW	1.6	4.1	9.00	1245	73.0	324	75	408	0.076
371491 714		7-8	SWW	1.6	3.2	8.79	1285	78.0	351	75	435	0.058
371492 4081		7-8	SWW	1.6	3.1	8.86	1190	70.0	349	73	412	0.052
371493 4082		7-8	SWW	1.6	2.8	9.00	1200	72.0	346	77	445	0.077
371494 3760		7-8	SWW	1.6	2.8	8.86	1225	72.0	353	77	392	0.091
371495 4504		7-9	SWW	1.8	3.7	8.74	1165	66.0	348	73	435	0.088
371496 4083		7-9	SWW	1.6	3.0	8.89	1280	75.0	346	76	401	0.075
371497 5598		7-11	SWW	2.4	2.9	8.96	1306	79.0	338	76	380	0.126
371498 4084		7-11	SWW	2.1	4.0	8.80	1250	74.0	342	76	424	0.069
371499 3761		7-11	SWW	1.9	2.7	9.00	1240	74.0	355	74	422	0.064
371500 4085		7-12	SWW	1.8	2.9	8.75	1260	75.0	335	74	338	0.192
371501 4089		7-12	SWW	1.4	2.9	8.84	1270	75.0	343	76	406	0.081
371502 3762		7-12	SWW	1.9	2.7	8.84	1215	69.0	332	75	432	0.067
371503 3763		7-12	SWW	1.4	2.8	8.65	1225	71.0	331	74	463	0.076
371504 3764		7-13	SWW	1.6	3.0	8.89	1240	74.0	346	76	422	0.061
371505 3765		7-13	SWW	1.8	2.8	8.90	1225	72.0	340	75	411	0.052
371506 5599		7-13	SWW	1.7	3.0	8.75	1235	72.0	343	75	547	0.054
371507 3766		7-14	SWW	1.9	3.1	8.90	1250	73.0	330	75	371	0.073
371508 3767		7-14	SWW	1.5	2.9	8.87	1245	74.0	341	75	402	0.091
371509 4090		7-14	SWW	1.8	4.3	8.77	1260	73.0	344	75	431	0.085
371510 3768		7-15	SWW	1.3	2.9	8.71	1250	70.0	339	74	460	0.067
371511 3769		7-15	SWW	1.3	2.9	8.80	1220	68.0	336	75	439	0.066

NURSCO 135

LABNUM	VARIETY	IDNO	CLASS	TWT	WMIST	WPROT	FYELD	FASH	MSCOR	FPROT	MABS	FABS
371512 4087		7-15	SWW	61.3	10.3	8.6	72.4	0.48	78.4	6.9	52.4	51.8
371513 4091		7-15	SWW	61.6	10.4	9.8	71.3	0.43	79.2	8.7	54.1	53.1
371514 712		7-15	SWW	62.3	10.0	9.6	71.7	0.40	81.7	8.4	54.4	52.8
371515 4093		7-19	SWW	61.9	10.2	10.3	73.4	0.40	84.1	8.8	53.2	52.7
371516 4094		7-20	SWW	62.1	10.5	10.5	73.2	0.42	81.5	8.9	52.9	52.4
371517 700		7-25	SWW	61.4	10.5	9.5	72.1	0.42	78.8	7.8	52.7	52.1
371518 701		7-25	SWW	61.1	10.3	10.2	71.6	0.43	79.7	8.2	54.0	52.6
371519 702		7-25	SWW	61.9	10.5	9.8	70.0	0.43	77.9	8.3	53.7	53.0
371520 703		7-25	SWW	62.4	10.1	10.4	72.2	0.48	78.4	8.9	54.7	53.2
371521 710		7-20	SWW	62.1	10.0	11.0	72.5	0.42	80.6	9.2	53.7	52.9
371522 711		7-20	SWW	62.0	9.9	10.1	72.4	0.40	82.4	8.5	54.3	52.8
371523 4095		7-22	SWW	61.6	10.2	10.2	72.7	0.40	83.5	8.8	53.3	52.9
371524 4096		7-22	SWW	61.5	10.8	10.2	72.5	0.40	81.9	8.5	53.7	53.0
371525 4510		7-25	SWW	62.3	10.5	9.8	71.7	0.41	81.3	8.7	54.1	52.8
371526 694		7-26	SWW	62.2	10.2	10.1	71.3	0.41	79.8	8.5	53.4	52.8
371527 695		7-26	SWW	62.0	10.3	9.8	71.3	0.40	80.8	8.1	53.7	52.8
371528 696		7-26	SWW	61.7	10.4	10.4	70.2	0.42	78.6	8.4	54.6	52.8
371529 4097		7-26	SWW	61.6	10.3	9.1	72.0	0.40	82.8	7.9	53.1	50.8
371530 4511		7-26	SWW	62.2	10.2	9.8	71.6	0.40	81.6	8.2	54.4	52.4
371531 4512		7-27	SWW	62.6	10.1	9.7	68.4	0.39	75.5	8.1	53.8	50.8

NURSCO 135

LABNUM	VARIETY	IDNO	CLASS	FPEAK	FSTAB	CODI	CAVOL	SCSOR	WTIN	NOSCO	WFN	WDSI
371512 4087		7-15	SWW	1.5	2.5	8.81	1240	71.0	304	74	348	0.130
371513 4091		7-15	SWW	2.0	3.1	8.80	1235	70.0	320	73	458	0.076
371514 712		7-15	SWW	2.3	3.4	8.84	1230	70.0	336	76	392	0.078
371515 4093		7-19	SWW	1.8	3.4	8.66	1245	69.0	330	75	447	0.073
371516 4094		7-20	SWW	1.7	3.2	9.05	1215	70.0	347	74	444	0.069
371517 700		7-25	SWW	1.6	3.6	8.75	1185	68.0	332	77	412	0.097
371518 701		7-25	SWW	1.7	3.4	8.86	1195	68.0	339	74	390	0.096
371519 702		7-25	SWW	2.1	3.3	8.74	1225	70.0	340	74	375	0.126
371520 703		7-25	SWW	2.0	4.1	9.00	1190	67.0	337	73	484	0.073
371521 710		7-20	SWW	2.2	5.0	8.84	1230	71.0	342	75	465	0.073
371522 711		7-20	SWW	2.0	3.3	8.82	1235	72.0	342	77	452	0.070
371523 4095		7-22	SWW	2.1	3.4	8.96	1240	72.0	347	75	436	0.071
371524 4096		7-22	SWW	1.5	2.8	8.94	1210	70.0	340	76	441	0.089
371525 4510		7-25	SWW	2.0	3.8	9.06	1210	70.0	324	74	385	0.118
371526 694		7-26	SWW	1.6	2.9	8.97	1270	73.0	349	76	385	0.087
371527 695		7-26	SWW	1.5	3.7	8.79	1240	71.0	336	75	342	0.194
371528 696		7-26	SWW	1.3	3.0	8.71	1255	74.0	347	75	414	0.108
371529 4097		7-26	SWW	1.6	3.0	8.81	1250	73.0	341	76	425	0.076
371530 4511		7-26	SWW	1.8	3.5	8.82	1245	72.0	341	76	440	0.071
371531 4512		7-27	SWW	1.5	3.8	8.82	1260	74.0	343	69	406	0.067

COMMENTS: Analysis were done in cooperation with U.S. Wheat Assoc., Inc. in an on-going study to determine the variability in wheat quality among export cargos of western white wheat. Samples collected were for the period of July/August, 1988.

N Obs	Variable	N	Minimum	Maximum	Mean	Std Dev
55	TWT	55	60.500	62.800	61.682	0.477
	WMIST	55	9.900	11.300	10.380	0.316
	WFROT	55	8.600	11.000	9.762	0.504
	FYELD	55	68.400	76.100	71.969	1.143
	FASH	55	0.390	0.480	0.417	0.018
	MSCOR	55	75.500	88.400	81.062	2.035
	FPROT	55	6.900	9.200	8.364	0.426
	MARS	55	51.700	54.700	53.405	0.686
	FABS	55	50.800	53.900	52.787	0.541
	FPEAK	55	1.100	2.400	1.709	0.266
	FSTAB	55	2.200	5.000	3.220	0.500
	CODI	55	8.650	9.060	8.840	0.101
	CAVOL	55	1165.000	1306.000	1229.473	29.230
	SCSOR	55	66.000	79.000	71.709	2.558
	WFN	55	338.000	547.000	414.491	37.082
	WDSI	55	0.052	0.215	0.091	0.035
	WTIN	55	304.0000000	355.0000000	339.0909091	10.2221124
	NOSCO	55	69.0000000	77.0000000	74.6545455	1.6011360

